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an Exploration of the Internationalisation Process of Irish Indigenous Software SMEs

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An Exploration of the Internationalisation Process of
Irish Indigenous Software SMEs

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Thesis submitted for fulfilment of the award of
Master of Philosophy Degree
(MPhil)

Supervised by: Ms. Aileen Kennedy
Mr. Gerry Mortimer

Dublin Institute of Technology

Faculty of Business
2005.

Declaration

I certify that this thesis, which I now submit for examination for the award of *MPhil*, is entirely my own work and has not been taken from the work of others save and to the extent that such work has been cited and acknowledged within the text of my work.

This thesis was prepared according to the regulations for postgraduate study by research of the Dublin Institute of Technology and has not been submitted in whole or in part for an award in any other Institute or University. The work reported on in this thesis conforms to the principles and requirements of the Institute's guidelines for ethics in research.

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Signature: *Kathy Hooney* (Candidate)

Date: *27-10-2005*

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Abstract

From meagre beginnings in the 1970s, the Irish software industry has emerged as one of the most interesting, exciting and successful Irish internationally traded service industries. Some thirty years later, the industry is still characterised by high levels of international trade activity, through niche market orientation and innovative and flexible management. Through an exploration of the internationalisation process in the context of Irish indigenous software firms, this thesis seeks to understand how this process of international expansion occurs, the barriers encountered throughout the process, future challenges for the industry and the use of strategic partnership activities as a facilitator in seeking international markets. Through a qualitative research approach, semi-structured in-depth interviews were conducted with key industry informants and Irish indigenous software firms engaged in internationalisation activities. The research findings revealed that the internationalisation process of Irish indigenous software firms do not, as a rule, conform to traditional internationalisation thought. However, support was found for alternative internationalisation theory, as the majority of firms sought from inception to engage in internationalisation activities, through an international mindset, as a consequence of limited domestic market size and opportunity. Intangible elements such as firm and manager credibility, reputation and experiential knowledge played a significant role throughout the internationalisation process, serving to enable and influence international market entry. Strategic partnering appeared a significant facilitator of the internationalisation process of Irish indigenous software firms, in terms of overseas entry and as a mechanism to leverage and enhance firm reputation and credibility. Finally, the impediments to past, present and future international expansion activities appeared as consequences of the nature of the Irish indigenous software industry, in terms of finance, size and scale and emergent foreign competition from low cost economies.

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List of Abbreviations

3G	Third Generation
BES	Business Expansion Scheme
CEO	Chief Executive Officer
CRM	Customer Relationship Management
EMU	European Monetary Union
ERP	Enterprise Resource Planning
ESRI	Economic and Social Research Institute
EU	European Union
FDI	Foreign Direct Investment
GATS	General Agreement of Tariffs and Services
GATT	General Agreement in Tariffs and Trade
ICT	Information and Communications Technology
IDA	Industrial Development Authority
INV	International New Venture
IP	Intellectual Property
ISA	Irish Software Association
ITS	Internationally Traded Service
MNE	Multinational Enterprise
NSD	National Software Directorate
OLI	Ownership, Location and Internalisation
R & D	Research and Development
SCM	Supply Chain Management
SMEs	Small to Medium Sized Enterprises
TCA	Transaction Cost Analysis
UK	United Kingdom
US	United States
VC	Venture Capital

Chapter One ~ Introduction

Why are an increasing number of high technology-based service firms entering international markets from inception of operations, without having accumulated any experiential knowledge within their domestic market? How does this process occur? In spite of a wealth of literature which seeks to widen our understanding of the antecedents and consequences of the internationalisation process, "there are still important gaps in our knowledge" (Blomstermo and Sharma, 2003:31), the internationalisation activities of internationally traded service firms remains unexplored (Jones, 1999) and basic concepts of the internationalisation process need to be questioned (Liesch et al., 2002). Fast changing environments push small firms to engage in internationalisation activities (Andersson et al., 2004). Globalisation effects, the rise of internationally traded services and the proliferation of internet technology have served as change catalysts to the method, motives and speed by which firms seek international expansion. This begs the question as to the suitability of traditional internationalisation theory in embracing these influences and providing adequate explanations of the internationalisation process of internationally traded service firms, particularly since research has shown that the majority of traditional internationalisation theory does not explain the internationalisation process of service firms (Buckley et al., 1991; Fillis, 2004).

Extending these questions to the context of Irish indigenous software industry also reveals a paucity of information, relative to the plethora of research regarding internationalisation processes. Software is the second largest Irish internationally-traded service (Crone, 2002), with Ireland becoming the largest software exporter in the world in 1998 (Green, 2000; Crone, 2002). Yet, to date, the examination of the internationalisation process of Irish internationally traded service firms remains diminutive, particularly in the context of indigenous software firms. This therefore

prompts an important research question; **“To explore the internationalisation process of Irish indigenous software firms”**.

Due to size, age and resource constraints, small firms face unique challenges throughout the internationalisation process (Manlova et al., 2002) such as; cultural effects, inherent service characteristics, tariff barriers and non-tariff barriers (Samiee, 1999). However, similar to traditional internationalisation literature, the majority of research pertaining to barriers and challenges to the internationalisation process is of US origin and of a cross-sectional nature, with little emphasis on knowledge intensive service firms such as software (Bell, 1997), particularly in an Irish context. Activities such as strategic partnering can serve to minimise these internationalisation barriers and are an effective strategy to surmount small firm resource deficiencies (Karagozoglu and Lindell, 1998; Lovelock, 1999; Zimmerman, 1999; Lu and Beamish, 2001; Andersson et al., 2004; Fillis, 2004). Furthermore, as international strategic partnering is considered a unique characteristic of the Irish indigenous software industry (Crone, 2003), a focus on the influence of strategic relationships on internationalisation signals a renewed emphasis on behavioural factors as means of explaining the principal issues of internationalisation (Liesch et al., 2002). With these issues in mind, the research objectives were conceptualised as follows: **“To discover the influence of strategic partnering on the internationalisation process of Irish indigenous software firms”** and **“to determine the barriers and challenges to the internationalisation process of Irish indigenous software firms”**.

Following the development of the research question and research objectives, it was important to identify an appropriate methodology in order to carry out the research. Historically, data collection regarding internationalisation is concerned with quantitative methods (Leonidou and Katsikeas, 1996; Fillis, 2001). Nonetheless, the traditional positivist method employed in researching internationalisation “has perhaps hindered much of the research in the area” of internationalisation (Coviello and McAuley 1999:36) and impeded new theory generation (Fillis, 2001). However, an interpretive approach “provides a richness and depth of understanding to the internationalisation process which is not possible with survey data” (Coviello and Munro, 1997:383). Therefore, “in order for theory to progress in a meaningful way, an increased qualitative input could prove useful” (Fillis, 2001:768). As such, an interpretative approach was employed during data collection, by means of semi-structured in-depth interviews with key software industry informants and owner/managers of Irish indigenous software firms.

Chapter Two ~ Literature Review

2.0 INTRODUCTION

There is much debate as to an appropriate method of examining the internationalisation of internationally traded services (Blomstermo and Sharma, 2003). Some believe that service internationalisation processes may be incomparable to the manufacturing sector (Chadee and Mattson, 1998) due to the characteristics of services. However, the examination of internationalisation theory relating to manufacturing contexts may bestow a greater appreciation and knowledge of the internationalisation process of service firms (O'Farrell et al., 1998; Javalgi et al., 2003). Consequently, this chapter introduces the rise and classification of internationally traded services, examines the barriers and challenges to the internationalisation process (Sections 2.1 – 2.3) and reviews extant literature pertaining to traditional internationalisation theory (Sections 2.4 – 2.7) in the form of the Uppsala School, the innovation-related frameworks and foreign direct investment (FDI) theory. However, the applicability of traditional internationalisation theory is subject to continuing debate in the era of a modern global economy (Rosenzweig and Shaner, 2001) and the increased provision of internationally traded services. As such, the context upon which traditional internationalisation theory was developed has changed (Axinn and Matthyssens, 2001a). Therefore, alternative internationalisation perspectives of the network approach (Section 2.8) and the theory of international new ventures (Section 2.9) are also reviewed. Finally, the chapter concludes with a discussion of the role of strategic partnering and its role in the internationalisation process.

2.1 THE RISE OF INTERNATIONALLY TRADED SERVICES

Services are now the fastest growth sector of most advanced and progressive nations (Wymbs, 2000; Oyewole, 2001; Javalgi et al., 2003; Enterprise Strategy Group, 2004c). This is attributable to the recognition of services as a high value-added constituent of national economies, excellent sources of competitive advantage and high skilled knowledge-intensive employment opportunities, which reflects a restructuring of the division of labour between manufacturing and service sectors within advanced economies (Cicic et al., 1999; Enterprise Strategy Group, 2004c). This increased service prominence has prompted recognition of the potential for internationally traded services (ITS), which comprise “deeds, performances (and) efforts, conducted across national boundaries” (Clark and Rajaratnam, 1999:301) and differ from domestic services through crossing national borders and involving in engagement with foreign cultures (Clark and Rajaratnam, 1999). In addition to an increased shift towards a services economy, globalisation, trade liberalisation policies and the proliferation of Internet technology are among the contributing factors to the emergence and prominence of internationally traded services (Enterprise Strategy Group, 2004b).

2.1.1 The Shift Towards Global Service Markets

Customer homogenisation has increased (Cicic et al., 1999; Knight and Cavusgil, 2004) on account of the unifying effect of media, travel, information transfer and technology (Vandermerwe and Chadwick, 1989; Cicic et al., 1999). Globalisation is also associated with this homogenisation, as standardised buyer preferences around the world has simplified the development and positioning of products, which significantly reduces the cost of seeking overseas markets (Knight and Cavusgil, 2004). As a result, an increasing number of services are now considered internationally tradable (Primo-

Braga, 1996; Forfás, 2000; Oyewole, 2001). Globalisation has also prompted the escalation of international competition through increased import and export activities and the emergence of new international competitors (Lovelock, 1999). Service firms are therefore obliged to follow competitors into new markets and engage in client-following strategies, to incorporate customer value overseas (Lovelock, 1999; Wymbs, 2000; Axinn and Matthyssens, 2001a) and compensate for high levels of intangibility and customer contact requirements inherent within many international service offerings (Patterson and Cicic, 1995).

2.1.2 Trade Liberalisation

Historically, governments have focused much attention on manufacturing and merchandise trade internationalisation. Intangibility of service and insufficient data regarding the true monetary value of international services has hampered the development of appropriate government policies to further aid international service growth (Samiee, 1999). However, increased globalisation opportunities in the form of trade liberalisation has resulted in an increase of available international markets and opportunities (Knight, 1999; Wymbs, 2000; World Trade Organisation, 2002; Javalgi et al., 2003; Enterprise Strategy Group, 2004b). These trade liberation policies include harmonisation of standards and regulations across the European Union to discourage protectionist policies (Lovelock, 1999), a recent proposed European Commission directive to reduce bureaucracy, create coherent systems, and establish common rules to increase trust and confidence in internationally traded services (Enterprise Strategy Group, 2004c) and the General Agreement of Tariffs and Services (GATS).

GATS was enacted in 1995 to create plausible and consistent international service trade procedures (World Trade Organisation, 2002). The agreement is similar to the provisions established by the General Agreement in Tariffs and Trade (GATT). However, GATS encompasses transactions with establishment trade and the introduction of mechanisms to deal with restrictions on forms of legal organisation that foreign firms operate under (Primo-Braga, 1996). GATS make a distinction between four modes of service supply. “Cross-border supply” consists of services that flow from one country to another. “Consumption abroad” relates to service customers who transverse borders to consume services. “A commercial presence abroad” signifies the institution of overseas foreign operations by a service supplier and “the presence of natural persons” denotes a local supplier transversing borders to supply services within an overseas market (Primo-Braga, 1996; World Trade Organisation, 2002; Enterprise Strategy Group, 2004b).

2.1.3 Technology as a Facilitator for Increased Internationally Traded Services

Technology which propels service competitiveness is information or managerial based (Grosse, 1996). The increased proliferation of technology has facilitated increased levels of service internationalisation and the method by which it crosses national boundaries (Vandermerwe and Chadwick, 1989; Cicic et al., 1999). Electronic business information services complement transactions concerning physical goods and services. Low-cost telecommunications and information transfer assist and augment foreign direct investment (FDI) movement within these service industries (Wymbs, 2000). This technology has as a unifying effect, making national borders (Winstead and Patterson, 1998; Cicic et al., 1999) and boundaries between firms and countries less significant (Cicic et al., 1999; Clark and Rajaratnam, 1999; Wymbs, 2000).

Technological innovation has extended opportunities for ITS embodied within goods, for example software disks, film videotapes and music compact disks (Vandermerwe and Chadwick, 1989; Primo-Braga, 1996; Oyewole, 2001). Moreover, the diffusion of such technologies has made internationalisation activities increasingly cost effective (Knight and Cavusgil, 2004). As a result, technology is a platform for the development and growth of modern economies (Grosse, 1996; Hastings and Perry, 2000), empowering firms to reappraise current business models, capture new markets, or rebuild old ones (Wymbs, 2000).

Technology may significantly impact the momentum and speed of internationalisation (Winstead and Patterson, 1998; Wymbs, 2000; Moen et al., 2003). The increased availability of online technologies and the provision of improved online information, serves to empower customers to turn purchase intentions into active transactions (Axinn and Matthyssens, 2001a) and enables firms conduct export market research (Hamill, 1997). Thus, the Internet serves as a mechanism to reduce the level and cost of interaction between firms and customers (Primo-Braga, 1996) through the provision of a “virtual presence” in the marketplace and “virtual teams” within firms (Axinn and Matthyssens, 2001a). Internet technology also increases the speed of industry change, promotes a shift from physical to electronic markets (Wymbs, 2000) and impacts upon internal processes of the firm (Axinn and Matthyssens, 2001a). Furthermore, technological advances facilitate increased supplier network integration and provide comprehensive customer preference and demographic information sources (Wymbs, 2000; Axinn and Matthyssens, 2001a). Consequently, service firms which consider the effect of information technology upon business environments “will get to the future first” (Wymbs, 2000:466).

2.2 CLASSIFYING INTERNATIONAL SERVICES

The lack of a universal and comprehensive service classification scheme, has impinged upon the analysis of the development of appropriate service internationalisation strategies (Samiee, 1999) capable of illustrating the complexity of the service internationalisation process (Edvardsson et al., 1993). Nonetheless, extant literature provides several examples of classification schemes which aim to address this imbalance (Erramilli, 1990; Ekeledo and Sivakumar, 1998) and consider the impact of service characteristics on the internationalisation of services. These unique characteristics comprise perishability, heterogeneity, intangibility and inseparability (Nicoulaud, 1989; Dahringer, 1991; Knight, 1999). The examination of these characteristics in an international context is important to aid understanding of challenges in internationalising services (Erramilli, 1990; Buckley et al., 1991; Clark et al., 1995; Cicic et al., 1999; Knight, 1999), as service firms face a limited set of entry parameters (Patterson and Cicic, 1995) in comparison to manufacturing firms. Consequently, the type of service will determine the most appropriate entry method for the firm (Erramilli, 1990; Sarathy, 1999). These unique service characteristics in an international context, in conjunction with international service classification schemes are discussed below.

2.2.1 The Impact of Perishability and Heterogeneity

Unlike intangibility and inseparability, perishability and heterogeneity are less prominent determinants of service internationalisation. Perishability means services cannot be stored (Dahringer, 1991; Clark and Rajaratnam, 1999). Thus, inseparable services are subject to perishability as they are made available and consumed simultaneously or they are lost, as services cannot be accounted for after production

(Dahringer, 1991; Knight, 1999). Heterogeneity signifies that there is variability in the outcome of the service provision (Berry, 1980). Therefore, international service consumption experiences differ from one customer to another (Dahringer, 1991; Knight, 1999) and is subject to shifting customer service levels (Buckley et al., 1991). Thus, firms may face challenges such as paralleling staff training across markets (Sarathy, 1999) to ensure service quality (Dahringer, 1991).

2.2.2 The Impact of Intangibility

Intangibility is a prominent feature in many service classification frameworks due to its strategic importance in the context of overseas markets (Patterson and Cicic, 1995). Intangibility means that services do not always comprise physical features (Berry, 1980; Buckley et al., 1990). Highly intangible services are called “pure services”, are usually performances (Patterson and Cicic, 1995), cannot be touched or felt before purchase and are not easily defined, in comparison to goods which are usually possessed after purchase (Berry, 1980; Patterson and Cicic, 1995). These services are problematic to assess and are subject to judgement by word of mouth (Patterson and Cicic, 1995) as the customer cannot experience the service before purchase (Nicoulaud, 1989). Due to their ephemeral nature, intangible international services suffer from limited patent protection, cannot be displayed and prices may be problematic to set (Dahringer, 1991; Knight, 1999). As such, high degrees of service intangibility implies that pure services are susceptible to high levels of internationalising risk (Patterson and Cicic, 1995) and may necessitate a client-following strategy (Erramilli, 1990; Patterson and Cicic, 1995). The consideration of client-following and market-seeking motives are considered one of the major factors that influence entry mode choice in foreign markets (Ekeledo and Sivakumar, 1998). A client-following strategy serves to lessen market uncertainty, as

the firm has accumulated extensive experiential knowledge regarding the client firm (Erramilli and Rao, 1990; Majkgård and Sharma, 1998). Consequently, client-following firms can commit increased resources towards distant international markets and are less likely to engage third parties to enter foreign markets. Market-seekers, on the other hand, lack foreign market experiential knowledge and enlist strategic partners to establish credibility and relationships with foreign firms (Erramilli and Rao, 1990; Majkgård and Sharma, 1998; Blomstermo and Sharma, 2003).

2.2.3 The Impact of Inseparability

In comparison to intangibility, inseparability is related to more operational dimensions of internationalisation (Patterson and Cicic, 1995). Inseparability of service occurs when it is supplied and used at the same time (Erramilli, 1990; Buckley et al., 1991; Dahringer, 1991; Erramilli and Rao, 1993; Ekeledo and Sivakumar, 1998), therefore, the production and the consumption of the service cannot be separated (Berry, 1980). Inseparable international services require the producer's direct involvement (Buckley et al., 1991; Erramilli and Rao, 1993; Cicic et al., 1999) and physical presence (Berry, 1980) as the service is likely to be highly customised (Patterson and Cicic, 1995), which makes mass production extremely difficult (Dahringer, 1991; Knight, 1999). Similar to intangible services, inseparable services are subject to high internationalising risk, as the firm must place a large emphasis on appropriate and effective communication and cultural effects in overseas markets (Patterson and Cicic, 1995). However, some services, such as software, are separable and these are called "hard services", while inseparable services are called "soft services" (Erramilli, 1990).

2.2.4 Hard and Soft Services

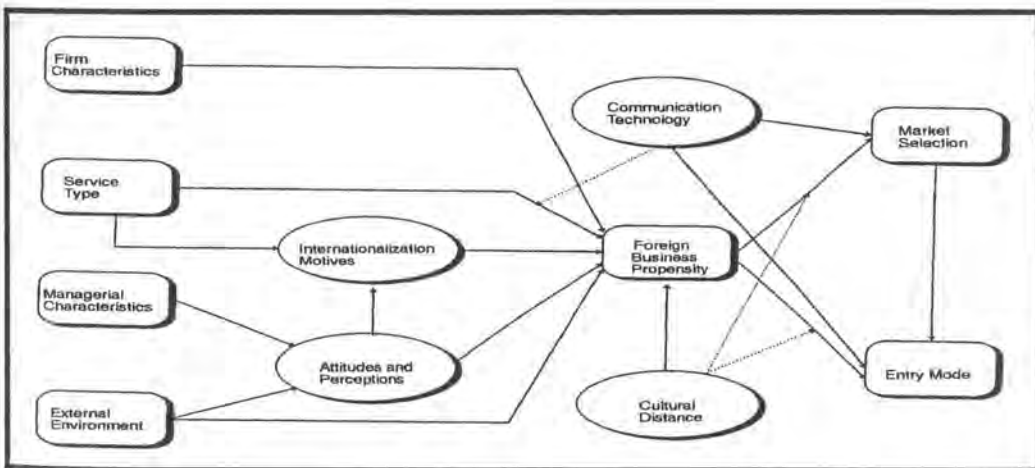
The division of international services into “hard services” or “soft services” takes into account the impact of traditional service characteristics upon internationally traded services and is considered a useful mechanism to analyse service firm overseas market entry (Ekeledo and Sivakumar, 1998; Cicic et al., 1999; Stare, 2002). Hard services comprise, among others, packaged software and architectural services, (Erramilli, 1990; Ekeledo and Sivakumar, 1998). Production and consumption is separable within hard services and they are therefore suitable for export (Erramilli, 1990; Erramilli and Rao, 1993; Stare, 2002; Javalgi et al., 2003). Hard services may be produced in one country, embodied in some physical or tangible form and then exported to another country (Erramilli, 1990). As limited or no local presence is required of the firm (Erramilli, 1990; Javalgi et al., 2003), this activity may take the form of agency or direct exporting (Erramilli, 1990), licensing, exporting, management contracts, joint ventures and sole ownership (Ekeledo and Sivakumar, 1998). Therefore, similarities appear to exist between hard services and product internationalisation methods (Weinstein, 1977; Erramilli, 1990; Ekeledo and Sivakumar, 1998; Javalgi et al., 2003).

Soft services are most likely to possess the majority of the traditional service characteristics (Buckley et al., 1991) and include customised data processing and advertising (Erramilli, 1990; Ekeledo and Sivakumar, 1998). However, a large degree of inherent inseparability and intangibility within these services, infers that soft services depend on non-export entry modes (Buckley et al., 1991; Ekeledo and Sivakumar, 1998; Stare, 2002; Javalgi et al., 2003) such as franchising, the establishment of an overseas presence or a client-following strategy (Erramilli, 1990; Erramilli and Rao, 1990; Erramilli and Rao, 1993; Patterson and Cicic, 1995; Ekeledo and Sivakumar, 1998;

Winstead and Patterson, 1998). As such, soft services require considerable investment terms of finance and time in order to cultivate the right operational environment (Erramilli, 1990).

In consideration of the dynamics of hard and soft services and taking the unique characteristics of services into account, Cicic et al., (1999) maintain that hard services, such as software do not internationalise incrementally, in comparison to the suppositions of traditional internationalisation literature. As such, these hard services must internationalise with full foreign market presence or “no involvement at all” (Cicic et al., 1999). The authors maintain that communication technology, the extent to which goods are embodied within services, the impact of cultural distance and the method by which the firm enters the market (depending on the hard or soft nature of the service) will determine the service firm’s internationalisation process. These assumptions prompted the development of a conceptual model of the internationalisation of service firm, which is depicted in Figure 2.2.4.

Figure 2.2.4 A Conceptual Model of Internationalisation of Service Firms



Source: Cicic, M., Patterson, P. G. and Shoham, A., (1999) "A Conceptual Model of the Internationalization of Services Firms" *Journal of Global Marketing*, Vol. 12, No. 3, pp. 81 - 106: 91.

However, many firms use electronic delivery mechanisms for services (Vandermerwe and Chadwick, 1989; Patterson and Cicic, 1995; Hamill, 1997; Wymbs, 2000; Axinn and Matthyssens, 2001a), offer a combination of goods and services which incorporate hard and soft characteristics (Blomstermo and Sharma, 2003), provide services which exist in the continuum between hard and soft services and exhibit combinations of entry mode strategies (Grönroos, 1999). Consequently, its contribution remains limited as the model is empirically untested, despite being a seminal attempt to conceptualise the internationalisation process of service firms.

2.2.5 International Service Classifications

As noted in 2.2, the absence of a comprehensive scheme in order to classify international services has inhibited the development of strategies of service internationalisation. However, extant literature does provide several attempts of international service classifications. The first of these was developed by Patterson and Cicic (1995), who present a framework of four forms of international services, through examination of: the nature of the service, level of personal contact required and degree of inherent service intangibility. This classification is significant in highlighting the importance of intangibility and inseparability as issues for internationalising service firms, but is considered unsophisticated and inconsistent in its attempt to present an integrated outline of the behaviour of all service firms, particularly those firms who operate across several service classifications (Buckley et al., 1991).

Firstly, the classification as developed by Patterson and Cicic is outlined and is subsequently followed by international service classifications of Vandermerwe and Chadwick (1989), Clark and Rajaratnam (1999) and Lovelock and Yip (1996).

- ❖ Location-free professional services do not necessitate a permanent overseas presence or the presence of the service provider during service production and delivery (e.g. market research).
- ❖ Location-bound customised services require the physical presence of both customer and supplier, due to high levels of service customisation (e.g. management consulting, project management).
- ❖ Standardised service packages possess embodied goods and involve more standardisation than customisation as the service component is rooted within the package (e.g. software development).
- ❖ Value-added customised services necessitate a high element of interaction, communication and customisation between supplier and customer (e.g. on-site training, computer hardware consulting).

Patterson and Cicic (1995) based their classification on the conceptual work of Vandermerwe and Chadwick (1989), who analysed international services on the basis of the comparative involvement of goods, with the degree of consumer/producer interaction required. The result of this classification is a service industry matrix, which distinguishes clusters of services according to market servicing modes of exporting, licensing or joint ventures and FDI (Vandermerwe and Chadwick, 1989).

- ❖ Exporting: Minimum investment, control and presence (e.g. software diskettes, movies/videocassettes).

- ❖ Reliance on third parties: Medium investment, control and presence (e.g. retailing, shipping, electronic mail, online services).
- ❖ Foreign Direct Investment: Maximum investment, control and presence (e.g. engineering, consulting, advertising, insurance).

Clark and Rajaratnam (1999) propose a meta-classification of four types of international services; international contract-based services, international vehicle-based services, international asset-based services and international object-based services.

- ❖ International vehicle-based services involve actions or deeds, which employ wire, wireless transmissions or other assistive mediums to transverse national boundaries (e.g. computer services).
- ❖ International object-based services pertain to the embodiment of international contract based services with physical attributes (e.g. video cassettes, computer software).
- ❖ International asset-based services entail actions or deeds performed by commercial firms engaging in domestically controlled strategies of FDI, to gain an operating foothold overseas through the establishment of a permanent overseas presence (e.g. banking).
- ❖ International contract-based services concern actions or deeds performed by service producers or consumers who cross national borders in order to carry out transactions with equivalent service actors overseas (e.g. consultancy services).

Lovelock and Yip (1996) propose a service categorisation scheme as part of a globalisation framework for business services. This framework examines the impact of

globalisation drivers upon service characteristics and globalisation potential. On the premise that traditional service characteristics are too generic and therefore not universally applicable to all service firms, the authors propose a “special set of characteristics” which serve to affect service internationalisation potential and service classification based on the nature of the service, customer involvement, the role of people, quality control, customer evaluation, lack of inventory, importance of time factors and electronic distribution channels (Lovelock and Yip, 1996).

- ❖ Information-based services infer that the firm engage in forms of data manipulation to service customers (e.g. education).
- ❖ People-processing services require customer involvement and results in customers travelling to the service provider or vice versa (e.g. health care).
- ❖ Possession-processing services involve servicing a customer’s asset or possession (e.g. car repair).

Table 2.2 presents an integrated framework of the hard/soft dichotomy and the alternative international service classifications. It is evident that these frameworks contain many similarities, as each classification is divisible into the hard/soft dichotomy (Ekeledo and Sivakumar, 1998) and all highlight the importance of intangibility and inseparability characteristics, although the characteristics hold varying emphasis between classifications. Service delivery mechanisms also differ between typologies, serving to highlight the impact of electronic, environmental and wireless technologies upon international services and reflecting the shift towards a service-based global economy, while still emphasising the importance of unique service characteristics upon the service internationalisation process. Similarly, Table 2.2 is significant in highlighting that software may be classified as a hard service.

Table 2.2 A Comparison of International Service Classifications

<i>Erramilli (1990)</i>	<i>Patterson and Cicic (1995)</i>	<i>Clark and Rajaratnam (1999)</i>	<i>Lovelock and Yip (1996)</i>
Hard services Direct exporting, agency, licensing, management contracts, joint venture	Standardised service packages - Software	International vehicle-based services - Software	Information-based services - Software
	Location-free professional services	International object-based services	People-processing services
Soft Services Non-exportable, franchising, the establishment of an overseas presence or a client-following strategy	Value-added customised services	International asset-based services	Possession-processing services
	Location-bound customised services	International contact-based services	

Source: Ekeledo, I. and Sivakumar, K., (1998) "Foreign Market Entry Mode Choice of Service Firms: A Contingency Perspective". *Journal of the Academy of Marketing Science*, Vol. 26, No. 4, pp. 274 - 292.

2.2.6 Classifying Software as an Internationally Traded Service

Software is a standardised service package which lends itself to traditional methods of exporting (Patterson and Cicic, 1995), such that the sellers may employ the use of assistive mediums to cross national boundaries as an international vehicle-based service as proposed by Clark and Rajaratnam, (1999) or an information processing service according to Lovelock and Yip (1999). Consequently, these characteristics and classifications suggest that software possesses high potential regarding international tradability through internationalisation strategies of licensing, exporting, management contracts, joint ventures and sole ownership activities (Ekeledo and Sivakumar, 1998).

According to Vandermerwe and Chadwick (1989) information technology lies in the intersection between three groups of foreign market service provision; 1) exporting with minimum overseas investment, control and market presence, 2) reliance on third parties regarding minimum overseas investment, control and presence and 3) foreign direct investment with maximum overseas control, investment and presence. As such,

information technology creates a new market-servicing mode. The characteristics of this mode are:

- ❖ Export activities.
- ❖ No requirement for physical movement by the service provider.
- ❖ The provision of overseas infrastructures.
- ❖ Overseas market presence is accomplished through positioning technology abroad (Buckley et al., 1990).

Proximity to the market is usually a requirement for selling services abroad (Buckley et al., 1991). However, software appears in the cross-section of a service and a product (Moen et al., 2003) and is intangible (Ekeledo and Sivakumar, 1998; Majkgård and Sharma, 1998; Moen et al., 2003), as it does not have a physical presence and exists within another medium. Furthermore, some software is heterogeneous due to project-based assignments (Moen et al., 2003) and differs from traditional services in being separable as clients can consume software independently of its production (Ekeledo and Sivakumar, 1998; Majkgård and Sharma, 1998; Moen et al., 2003). Additionally, software can be stored (Ekeledo and Sivakumar, 1998; Majkgård and Sharma, 1998) and be reproduced at little or no cost. Moreover, software may be bundled with goods, is suitable for electronic distribution (Moen et al., 2003) and a low-degree of personal contact is required during delivery (Erramilli, 1990; Ekeledo and Sivakumar, 1998). Therefore, software contains many features of a hard service (Majkgård and Sharma, 1998).

2.3 BARRIERS TO THE SERVICE INTERNATIONALISATION PROCESS

Previous sections have described the emergence of internationally traded services and the classification of software as an internationally traded activity. However, prior to presenting internationalisation theory, it is important to describe barriers and challenges that may impinge upon the internationalisation decision and process, as the dramatic rise and increase of internationally traded services has consequently prompted an increase in trade barriers and challenges to the internationalising service firm. However, the vast majority of studies concerning export barriers are of US origin and relate to manufactured goods (Bell, 1997; Leonidou, 2000). Consequently, this section examines both general export barriers and barriers relating to internationally traded service firms.

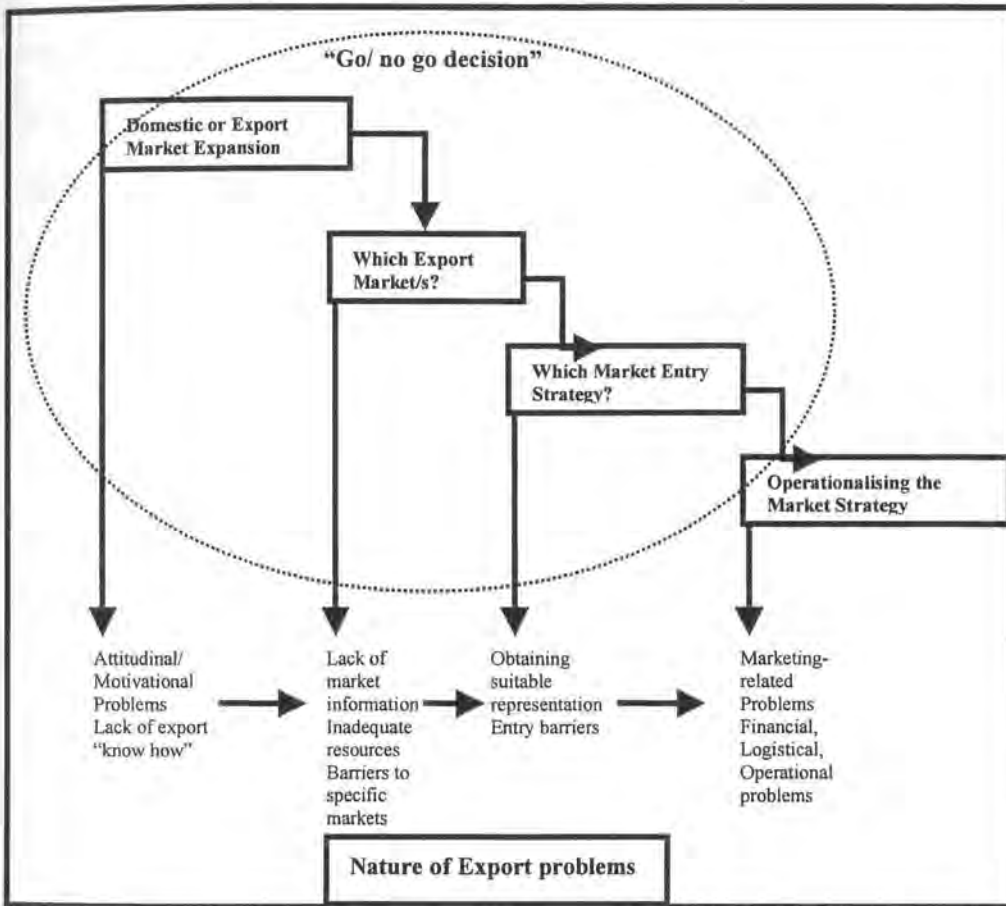
Export barriers vary regarding type and level of severity (Dicht et al., 1990; Fillis, 2000) between individual service firms (Zimmerman, 1999). Barriers may comprise tariff barriers and non-tariff barriers. Tariff barriers include taxes and other such duties which may inflate ITS prices in comparison to local service providers (Dahringer, 1991; Samiee, 1999). Tariff barriers are more straightforward and obvious in comparison to non-tariff barriers (Dahringer, 1991). Non-tariff barriers comprise attitudinal, procedural, structural, operational and other constraints which encumber firms' capacity to instigate, expand, or maintain international operations (Winstead and Patterson, 1998). These barriers may affect internationalisation in terms of; knowledge deficiency, lack of managerial commitment (Leonidou, 1995; Fillis, 2000; Suárez-Ortega, 2003), inconsistent business practices between domestic and foreign markets, shifting consumer expectations (Bilkey, 1978; Fletcher, 2001), foreign rivalry (Winstead and

Patterson, 1998), deficiencies of foreign associations, partnerships or relationships (Bilkey, 1978; Karagozoglu and Lindell, 1998; Winstead and Patterson, 1998), buy national policies, government competition, scarce factors of production and restrictions on service buyers or sellers (Dahringer, 1991).

Firms may experience psychological barriers (Bell, 1997) in the form of a short-term internationalisation perspective, lack of commitment, a fear of operating overseas (Hamill, 1997), absence of export knowledge (Bauerschmidt et al., 1985) and management apathy (Bell, 1997). Winstead and Patterson (1998) examined differences between perceived and actual internationalisation barriers. Interestingly, firms not engaged in exporting activities perceived cost, uncertainty, resource constraints, tariffs and the suitability of service for internationalisation as higher barriers to internationalisation than active internationalised firms did. These negative attitudes and internal firm barriers can adversely affect firms' international performance. The adoption of favourable management attitudes to service internationalisation activities, intensive international training (Cicic et al., 2002) and policy initiatives to educate non-exporting firms as to the potential of overseas markets (Leonidou, 1995) serves to reduce these and external barriers. This highlights that internationalisation barriers not only limit firm entry mode options (Ekeledo and Sivakumar, 1998) but also impinge upon the internationalisation decision and process. However, service firms appear to show higher levels of commitment to internationalisation activities than manufacturing firms (Chadee and Mattson, 1998), which highlights that lack of commitment and fear regarding overseas markets may no longer be considered as a limiting factor for the internationalisation process (Hadjikhani, 1997). Figure 2.3 provides a concise summary

of various export problems and decisions which considers both the internal and external firm environment (Bell, 1997).

Figure 2.3 The Nature of Export Barriers



Source: Bell, J. (1997), "A Comparative Study of the Export Problems of Small Computer Software Exporters in Finland, Ireland and Norway", *International Business Review*, Vol. 6 No. 6, 587.

According to Bell (1997) internationally traded software firms encounter export barriers regarding delays in payment from overseas customers, currency fluctuations and obtaining export finance (Bell, 1997; Suárez-Ortega, 2003) because of the high risk nature of the industry (Bell, 1997). Interestingly, overseas customer communication was also cited as an internationalisation issue, however, this communication was found to be related to the cost of the process as opposed to the process itself (Bell, 1997).

Notwithstanding the fact that the majority of export barriers are concerned with the foreign environment that the firm operates or plans to operate in (Leonidou, 2000), service internationalisation is also hampered by the presence of service characteristics (Nicoulaud, 1989). As previously discussed, unique service characteristics comprise intangibility, heterogeneity, perishability and inseparability (Ekeledo and Sivakumar, 1998). Intangibility presents a need to engage personal customer contact (Nicoulaud, 1989), however, the embodiment of services with a tangible good results in a reduction of the intangibility effect (Dahringer, 1991; Patterson and Cicic, 1995; Winstead and Patterson, 1998). Heterogeneity implies a greater emphasis on customer service and cultural aspects of the service (Nicoulaud, 1989; Samiee, 1999). Nonetheless, intensive customisation and rigorous staff training and development will ensure customer satisfaction lessens service heterogeneity (Dahringer, 1991; Patterson and Cicic, 1995; Winstead and Patterson, 1998) and appropriate advertising and marketing campaigns will establish a well defined perception of the service overseas (Nicoulaud, 1989). However, since software contains characteristics of intangibility, heterogeneity, separability and "storability" (Ekeledo and Sivakumar, 1998), this implies that inseparability and perishability do not present internationalisation barriers to software firms. Notwithstanding this, other forms of ITS (insurance for example) are susceptible to these characteristics in the form of demand management and high levels of customer contact and service supplier involvement (Dahringer, 1991; Zimmerman, 1999).

Irrespective of entry mode employed, service firms are susceptible to overseas cultural issues, such as language, (Leonidou, 2000; Suárez-Ortega, 2003), government regulations (Lovelock, 1999) and other country specific effects (Clark and Rajaratnam, 1999). As services generally involve some degree of human resources, the probability

of cultural incongruity in overseas markets is enhanced (Samiee, 1999). Accordingly, firms should seek to understand social institutions in overseas markets that they wish to enter (Nicoulaud, 1989). In general, smaller and younger firms (Leonidou, 1995, 2000) tend to show greater vulnerability to export problems than larger firms. Small entrepreneurial firms are challenged by overseas competition with larger firms with increased funding (Bauerschmidt et al., 1985; Leonidou, 2000; Westhead et al., 2002; Suárez-Ortega, 2003). Many software firms place a large emphasis on research and development activities (Karagozoglu and Lindell, 1998). However, such activities also contribute to the overall cost structure of the firm and result in difficulty setting in prices in international markets (Nicoulaud, 1989; Bell, 1997). Software firms can overcome entry mode constraints through local firm acquisition (Lovelock, 1999), indirect entry through management contracts, franchising (Dahringer, 1991; Lovelock, 1999) or through the use of electronic delivery mechanisms (Dahringer, 1991; Hamill, 1997; Lovelock, 1999). Internet usage can serve as an instrument to increase international awareness and permits access to global information sources and market research, which may increase firm confidence and commitment towards international markets and therefore results in increased internationalisation speed (Hamill, 1997; Fillis, 2004). However, regulations regarding Internet technology, its usage and control measures, also contribute to barriers faced by internationalising service firms (Samiee, 1999). Therefore, it is evident that the internationalisation of service firms is a complex process, as the unique features of services and the nature of the service offering will influence the method by which the firm enters overseas markets. The rise of internationally traded services due to a shift towards a global service economy and increased proliferation of information technology also serves to impact upon the nature of the service, its delivery method and markets served (Moen et al., 2004). This raises

of cultural incongruity in overseas markets is enhanced (Samiee, 1999). Accordingly, firms should seek to understand social institutions in overseas markets that they wish to enter (Nicoulaud, 1989). In general, smaller and younger firms (Leonidou, 1995, 2000) tend to show greater vulnerability to export problems than larger firms. Small entrepreneurial firms are challenged by overseas competition with larger firms with increased funding (Bauerschmidt et al., 1985; Leonidou, 2000; Westhead et al., 2002; Suárez-Ortega, 2003). Many software firms place a large emphasis on research and development activities (Karagozoglu and Lindell, 1998). However, such activities also contribute to the overall cost structure of the firm and result in difficulty setting in prices in international markets (Nicoulaud, 1989; Bell, 1997). Software firms can overcome entry mode constraints through local firm acquisition (Lovelock, 1999), indirect entry through management contracts, franchising (Dahringer, 1991; Lovelock, 1999) or through the use of electronic delivery mechanisms (Dahringer, 1991; Hamill, 1997; Lovelock, 1999). Internet usage can serve as an instrument to increase international awareness and permits access to global information sources and market research, which may increase firm confidence and commitment towards international markets and therefore results in increased internationalisation speed (Hamill, 1997; Fillis, 2004). However, regulations regarding Internet technology, its usage and control measures, also contribute to barriers faced by internationalising service firms (Samiee, 1999). Therefore, it is evident that the internationalisation of service firms is a complex process, as the unique features of services and the nature of the service offering will influence the method by which the firm enters overseas markets. The rise of internationally traded services due to a shift towards a global service economy and increased proliferation of information technology also serves to impact upon the nature of the service, its delivery method and markets served (Moen et al., 2004). This raises

the question as to whether traditional and alternative internationalisation theory are appropriate constructs to explain the internationalisation process of internationally traded software firms in the context of these issues.

2.4 TRADITIONAL INTERNATIONALISATION THEORY

The majority of traditional internationalisation research relates to multinational enterprises (MNE). Within this perspective there is research pertaining to internationalisation processes and foreign direct investment theories, which are rooted in the theory of the resource-based view of the firm (which was developed by Penrose in 1959). The theory is concerned with the identification of variables that enhance the sustainable competitive advantage of the firm (Fahy, 1996; Dunning, 2000a; Caloghirou et al., 2004; Park et al., 2004). Fahy (1996) based on the work of Barney, (1991) suggests that this sustainable competitive advantage is reliant upon special resource conditions (valuability, rareness, immobility and inimitability) which in an international context, are developed through experiential learning and managerial experience (Crick and Spence, 2004). Valuability refers to resources that enable firms to envisage or create efficiency or effectiveness, while rareness implies that the resource must be unique to the firm. Immobility resources are those not easily traded between competitors and inimitability of resources signifies that they are not easily copied (Fahy, 1996).

2.5 THE UPPSALA SCHOOL

Much internationalisation research centres on the contributions of Johanson and Weidersheim-Paul (1975) and Johanson and Vahlne (1977, 1990), who developed the Stages Approach and the Uppsala Process Model of internationalisation. These theories are commonly referred to as the Uppsala School (Morgan and Katsikeas, 1997). Developed in the 1970s, the theories provided a major step forward in presenting sound theoretical explanations of internationalisation processes (Blomstermo and Sharma, 2003), through consideration of the impact of knowledge and experience upon internationalisation activities (Anderson, 1993). As such, these theories remain some of the most influential contributions to international business today (Coviello and McAuley, 1999).

2.5.1 The Stages Approach

Internationalisation processes are traditionally categorised in a linear manner through the use of a stage framework (Anderson et al., 1998). The Uppsala stage approach, devised by Johanson and Weidersheim-Paul (1975), maintains internationalisation is a function of incremental decisions, stages or sequences of learning from complete orientation on domestic activities to a concentration on foreign operations (Johanson and Weidersheim-Paul, 1975; Johanson and Vahlne, 1977; Welch and Luostarinen, 1988; Johanson and Vahlne, 1990; Anderson, 1993, 1997; Hadjikhani, 1997; Cicic et al., 1999; Roberts, 1999; Fletcher, 2001; Whitelock, 2002; Fillis, 2004). The authors conducted a longitudinal growth examination of four Swedish multinationals. These firms exhibited small international growth steps, categorised by the authors as internationalisation activity (Johanson and Weidersheim-Paul, 1975; Morgan and

Katsikeas, 1997) and determined that internationalisation consists of four distinct stages of involvement.

- ❖ **Stage 1:** No regular exporting activities.
- ❖ **Stage 2:** The commencement of exporting activities, generally through an agent.
- ❖ **Stage 3:** The establishment of an overseas subsidiary.
- ❖ **Stage 4:** The establishment of overseas production facilities.

The model assumes that firms begin operations within the domestic market, with the most important challenges to overseas growth being knowledge and resource deficiencies (Johanson and Weidersheim-Paul, 1975). However, this uncertainty diminishes through incremental decision-making and increased learned knowledge of overseas markets. Thus, knowledge activities and firm organisational structure determine the firm's position within the framework (Johanson and Weidersheim-Paul, 1975). The risk of overseas market operation decreases as internationalisation progresses and the firms knowledge regarding foreign markets increases as the firm's desire to control sales and seek further international growth intensifies (Johanson and Weidersheim-Paul, 1975; Leonidou and Katsikeas, 1996). The process culminates in a stepwise and gradual internationalisation progression process, with the eventual establishment of overseas production facilities (as indicated in stage four). Initial knowledge deficiencies and concerns regarding uncertain foreign markets prompts the firm to initiate internationalisation to countries with common culture and business practices (Johanson and Weidersheim-Paul, 1975). This factor is known as psychic distance and is further discussed in section 2.5.4

Some authors have attempted to apply a service perspective to a stages framework. Edvardsson et al., (1993) propose a four-stage framework of adaptation to international activities.

- ❖ **Prospecting:** The firm adopts an entrepreneurial strategy to seek new business through business relationships and experiential knowledge.
- ❖ **Introduction:** The firm secures and strengthens activities within chosen geographical areas and engages in information searches to investigate further opportunities discovered at introduction stage.
- ❖ **Consolidation:** The firm secures its market position through marketing and technological activities.
- ❖ **Reorientation:** The firm adapts to local market conditions.

Roberts (1999) also argues for the applicability of stages approaches to service firm internationalisation through a special emphasis on the export function.

- ❖ **Stage 1:** Domestic operations.
- ❖ **Stage 2:** Domestically located exports.
- ❖ **Stage 3:** Wired and transhuman exports.
- ❖ **Stage 4:** The establishment of an overseas presence.
- ❖ **Stage 5:** The establishment of overseas production facilities.

As firms expand, they become international in nature and undertake initial exports that take the form of personnel travelling overseas, giving the firm its first experience of internationalisation and overseas operating practices. This stage stresses cultural sensitivity to protect the intangible assets of the firm, such as reputation and confidentiality. The firm may also consider merger and acquisition activities with local

firms to increase the speed of internationalisation and gain access to an already established client base (Roberts, 1999).

2.5.2 Criticism of the Stages Approach

Despite the popularity of the stages approach, the model is subject to criticism on methodological, interpretative, conceptual and empirical levels (Turnbull, 1987). Anderson (1993) argues that there is a lack of synergy between theoretical and operation aspects of the approach, since the original study was not subject to rigorous longitudinal verification (Anderson, 1993; Bell, 1995). Furthermore, the approach outlines the process of internationalisation as opposed to providing an explanation of how firms internationalise (Reid, 1981; Turnbull, 1987), with lack of explanation as to how the firm progresses from one stage to another despite a recognition that internationalisation commences with the first stage (Anderson, 1993). Factors such as the formation of strategic alliances or partnerships (Hamill, 1997; Axinn and Matthyssens, 2001a), other methods of entering foreign markets such as franchising, licensing (Hamill, 1997; Rialp and Rialp, 2001) and possible co-operative entry modes (Anderson, 1997; Hamill, 1997) are ignored in favour of exporting or agency export. Time dimensions within the model are unclear, as the approach gives no indication of time boundaries between stages (Anderson, 1993; Hadjikhani, 1997) and no reasons are identified as to why firms move between the stages (Rialp and Rialp, 2001). The approach considers internationalisation as a pattern of gradual international expansion (Rialp and Rialp, 2001), even if cultural effects which seek to inhibit the process are not present (Anderson, 1993) and irrespective of a planned and deliberate internationalisation strategy (Bell, 1995; Rialp and Rialp, 2001). Thus, the approach fails to account for the diversity and complexity of internationalising firms (Turnbull,

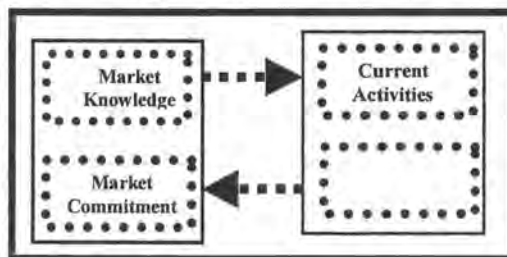
1987). A sequential path toward internationalisation (Welch and Luostarinen, 1988; Hadjikhani, 1997) does not account for firms who do not follow a sequence of events within the internationalisation process (Anderson, 1993) or skip stages due to experiential knowledge gained in other markets (Fillis, 2004). As Hamill (1997:315) notes “slow, incremental internationalisation no longer makes sense when the technology exists to provide SMEs with a low cost, instant gateway to international markets”. Johanson and Valhne (1990) maintain that the stages approach is most appropriate to providing an explanation of the firm’s early internationalisation activities. Nonetheless, the approach fails to account for firms that internationalise from inception, without a primary domestic market concentration (McDougall et al., 1994; Jones, 2001) or those who do not follow a gradual sequence of internationalisation (Hamill, 1997; Jones, 1999; Bell and McNaughton, 2000; Chetty and Wilson, 2003; Chetty and Campbell-Hunt, 2004). Therefore, the relevance of stages approach is challenged regarding the international orientation of many small firms, due to the influence international business as regards opportunity, threats and inward international activities from competitors, suppliers and customers (Hamill, 1997; Jones, 2001; Alon, 2004). Moreover, the stages approach is myopic through a single-firm focus (Axinn and Matthyssens, 2001a; Whitelock, 2002) and demonstrates a lack of flexibility, as it fails to encompass the context of the current international business environment (Rialp and Rialp, 2001) and neglects to include characteristics of firms who use information technology as a facilitator for internationalisation activities (Loane et al., 2004). As a result, the stages models are noted for lack of recognition of industry characteristics and market opportunity (Beamish et al., 1999). Consequently, the applicability of the stages model to service industries is questioned, particularly since Bell (1995) found that the

stages approach did not sufficiently explain the internationalisation process of software firms.

2.5.3 The Uppsala Process Model of Internationalisation

The Uppsala process model, as outlined in Figure 2.5.3, explains how firms adapt to internationalisation and outlines the effects of experiential knowledge and decision making on the process (Johanson and Vahlne, 1977; Morgan and Katsikeas, 1997; Roberts, 1999). The model was developed by Johanson and Vahlne in 1977 to redraw the concepts of internationalisation laid out by Johanson and Weidersheim-Paul in 1975 (Morgan and Katsikeas, 1997; Coviello and McAuley, 1999; Axinn and Matthysens, 2001a) and to incorporate the resource based view of the firm within the concept of the model (Hadjikhani, 1997; Axinn and Matthysens, 2001a). The Uppsala model focuses on common elements of the internationalisation process such as the decision to commence export activities, the establishment of export channels and subsidiary establishment and assumes long-term profit and the reduction of risk over time (Johanson and Vahlne, 1977). The main premises of the model are twofold; state aspects such as market commitment and market knowledge and change aspects such as current business activities and resource commitment decisions (Johanson and Vahlne, 1977; Eriksson et al., 2000).

Figure 2.5.3 The Uppsala Internationalisation Process Model



Source: Johanson, J. and Vahlne, J.-E., (1977) "The internationalization process of the firm - A model of knowledge development and increasing foreign market commitments". *Journal of International Business Studies*, Vol. 8, No. 1, pp. 23 - 32; 26.

Market commitment and knowledge refer to the amount and degree of resources committed to internationalisation (Johanson and Vahlne, 1977). Market knowledge determines the level of commitment and the evaluation of alternatives towards decision making (Johanson and Vahlne, 1977). Therefore, as commitment to internationalisation increases through the use of experiential knowledge, the involvement of the firm also increases in a cyclical fashion (Johanson and Vahlne, 1977; Welch and Luostarinen, 1988; Morgan and Katsikeas, 1997; Coviello and McAuley, 1999; Eriksson et al., 2000).

Current business activities provide a source of experiential knowledge through recruitment and/or advice from experienced personnel or other experienced individuals, which is integrated into the firm (Johanson and Vahlne, 1977). This experiential knowledge allows the firm perceive and formulate potential opportunities based on lessons learned from previous experiences (Johanson and Vahlne, 1977; Welch and Luostarinen, 1988; Johanson and Vahlne, 1990; Anderson, 1993; Whitelock, 2002). Therefore, international expansion is influenced and dependent on forms of managerial learning (Coviello and Martin, 1999; Coviello and McAuley, 1999).

Resource based commitment is based on decision alternatives (Johanson and Vahlne, 1977). The firm is affected by uncertainty regarding international markets and its economic environment. However, increased interaction between the firm and its external environment can signal decreased forms of uncertainty as experiential knowledge regarding overseas markets increases (Johanson and Vahlne, 1977; Roberts, 1999). The firm may undertake uncertainty-reducing strategies through risk management policies and offsetting high risk encountered in one market with low risk

opportunities in other markets and as a result increase scale in markets perceived as low risk (Johanson and Vahlne, 1977).

2.5.4 Psychic Distance

The authors proposed that firms principally seek to export to domestically similar countries in order to avoid uncertainty and factors which prohibit information and market flows (Johanson and Weidersheim-Paul, 1975; Morgan and Katsikeas, 1997) and defined this concept as psychic distance. Psychic distance encompasses a number of factors or elements that distinguish two countries culturally from each other, such as operating practices, customs, mores and norms. The psychic concept is subject to differing interpretations by firms who have extensive familiarity with international markets, as opposed to firms with little or limited international experience (Anderson, 1993). Furthermore, several authors (e.g. Sullivan and Bauerschmidt, 1990; Benito and Gripsrud, 1992) have carried out empirical research on the supposed connection between market choice on psychic distance and concluded that this link was not confirmed (Anderson, 1993). Interestingly, the stages approach place a greater emphasis on psychic distance than the Uppsala model (Hadjikhani, 1997). Yet despite these distinctions, a fundamental and theoretical connection exists between the Stages approach and the Uppsala process model (Hadjikhani, 1997), hence, the models tend to be jointly appraised.

2.5.5 The Uppsala and Stage Model Compared

Both the Uppsala model and stage framework models are behaviourally based (Johanson and Vahlne, 1977; Welch and Luostarinen, 1988; Johanson and Vahlne, 1990; Anderson, 1993) and consider internationalisation a gradual (Johanson and

Weidersheim-Paul, 1975; Johanson and Vahlne, 1977; Welch and Luostarinen, 1988; Johanson and Vahlne, 1990; Anderson, 1993; Hadjikhani, 1997; Morgan and Katsikeas, 1997; Roberts, 1999; Eriksson et al., 2000; Whitelock, 2002) and sequential process, consisting of small cumulative learning steps (Welch and Luostarinen, 1988; Morgan and Katsikeas, 1997; Eriksson et al., 2000). However, the Uppsala model concentrates on microeconomic theory and is market focused rather than country specific. The dynamics of internationalisation are presented in a cyclical model as opposed to a stage approach. Through a focus on commitment, knowledge and risk elements, the Uppsala process model is concerned with theory generation as opposed to presenting stages of internationalisation.

2.5.6 Criticism of the Uppsala Model

The model has been criticised for a lack of proper theory, as the concepts within it are not defined and it is difficult to specify the conditions and “causal linkages” which underpin the model (Anderson, 1993). The theoretical validity of the model is questioned in terms of empirical testing, since the original models are based upon two Scandinavian studies and are not universally appropriate to all firms (Turnbull, 1987; Oviatt and McDougall, 1999). As such, the Uppsala model describes rather than explains internationalisation (Fletcher, 2001), considering exporting a single activity process as opposed to one of many functions performed by the firm (Axinn and Matthyssens, 2001a). Theory which underpins the Uppsala approach, is too static to recognise cooperation and strategic relationships and understates the role of management in the internationalisation process (Axinn and Matthyssens, 2001b). In addition, the resource based view upon which the model is centred, has been criticised for lack of explanation of what exactly constitutes a resource and for failure to establish

sufficiently the contextual boundaries as to when resources result in competitive advantage (Burton et al., 2004). In addition, the Uppsala model suffers from limited predictive value (Johanson and Vahlne, 1977, 1990) and partiality (Hadjikhani, 1997), makes no explicit mention of competition (Whitelock, 2002) and is mainly composed of imperceptible and vague concepts, which lack definition (Anderson, 1993). Whitelock (2002) argues that although the Uppsala model is unique in a market information perspective, the model is too dependent on the existence of information to educate decision makers about the internationalisation process and is inhibited by insufficient links between theoretical and operational aspects of the internationalisation process (Anderson, 1993).

The model is myopic in its account of internationalisation processes as it is deterministic (Anderson, 1993, 1997), product orientated, and neglective of managerial decision making (Axinn and Matthyssens, 2001a). The exclusion of managerial influence is surprising, considering that the model is based on the resource based view of the firm, which recognises that managers are representative of the most valuable, unique and inimitable resources of the firm (Peng, 2001). Furthermore, firms who stress strong managerial commitment towards exporting tend to internationalise successfully (Aaby and Slater, 1988) and intangible commitment, which plays an important role in the early stages of the internationalisation process, is largely neglected within the Uppsala model (Hadjikhani, 1997). As such, the Uppsala model concentrates only on the process of internationalisation itself. It is unsuccessful in outlining how the process begins or finishes, it does not include factors that impinge upon the process and fails to elaborate how knowledge affects the commitment to internationalisation (Anderson, 1993). Additionally, the Uppsala model suffers from limited predictive

value (Johanson and Vahlne, 1977, 1990) and partiality (Hadjikhani, 1997), makes no explicit mention of competition (Whitelock, 2002) and is mainly composed of imperceptible concepts (Anderson, 1993). Whitelock (2002) argues that although the Uppsala model is unique in a market information perspective, the model is too dependent on the existence of information to educate decision makers about the internationalisation process and is inhibited by insufficient links between theoretical and operational aspects of the internationalisation process (Anderson, 1993).

Incremental internationalisation may not apply to firms pursuing diverse internationalisation activities for differing business units throughout the firm (Axinn and Matthyssens, 2001a). The concept of psychic distance is too focused on the assumption of cultural homogeneity (Axinn and Matthyssens, 2001a), as many firms experience narrow windows of opportunity in current business climates, therefore learning and psychic distance aspects of the Uppsala model may be irrelevant in high tech-sectors such as software (Axinn and Matthyssens, 2001a). Therefore, the relevance of models claiming internationalisation is a sequential and gradual process should be questioned (Hamill, 1997; Oviatt and McDougall, 1999). It is argued that there is little value in theories developed in the 1970s to explain some thirty years later, the modern and advanced rapid internationalisation activities of firms (Oviatt and McDougall, 1999) operating in an era characterised by increased globalisation, strategic alliances and rapid internationalisation activities. Consequently, the Uppsala model may only prove relevant to firms that do not operate in globalised industries (Oviatt and McDougall, 1999). Moreover, the process model has been shown not to be a valid construct to explain the internationalisation of service industries (Johanson and Vahlne, 1990; Buckley et al., 1991). However, despite limitations of the Uppsala School, the

paradigms are still considered dominant internationalisation theories, particularly in comparison to the quantitative nature of FDI theory and the relationship approach of the network perspective (Coviello and McAuley, 1999) as presented in subsequent chapter sections.

2.6 INNOVATION-RELATED STAGE FRAMEWORKS

The innovation-related internationalisation frameworks offered by American researchers; Bilkey and Tesar (1977), Cavusgil (1980), Reid (1981) and Czinkota (1982) propose an alternative internationalisation theory to the Uppsala School in the context of small to medium sized firms. Directly derived from Roger's (1962) innovation adoption method, these studies implicitly recognise stable periods between stages (Anderson, 1993; Morgan and Katsikeas, 1997). Each stage of the internationalisation process is considered an innovation (Gankema et al., 2000) where firms consolidate resources in preparation for embarking on the next phase of internationalisation activity. In conjunction, the innovation-related frameworks stress the importance of market-specific and experiential knowledge in the internationalisation process (Eriksson et al., 1997).

Bilkey and Tesar (1977) presented a six-stage internationalisation framework, describing firms exploiting international opportunities in increasing psychically distant countries (Bilkey and Tesar, 1977; Morgan and Katsikeas, 1997). The authors found support for sequential internationalisation. However, in contrast to the Uppsala School, factors signalling firm progression from one stage to the next differed between firms. Additionally, firm size was an unimportant internationalisation factor, particularly regarding firms with dynamic management capabilities (Bilkey and Tesar, 1977).

The lack of consistency in studies relating to export behaviour prompted Cavusgil (1980) and Reid (1981) to present a hierarchy of export expansion with a focus on the role of individual characteristics throughout the process framework. Cavusgil (1980) maintains that internationalisation progression consists of pre-export and information search, experiential involvement, active involvement and committed involvement. These stages are dependant on inhibiting and facilitating influences of decision makers, firm resource availability and firm characteristics (Morgan and Katsikeas, 1997; Coviello and Martin, 1999). Similarly, Reid (1981) suggests that internationalisation activities consist of a sequence of export awareness, export intention, trial, evaluation and acceptance to psychically distant markets. These stages are a function of positive management attitude, experiential knowledge, available market opportunity and excess resource capacities within the firm (Reid, 1981; Morgan and Katsikeas, 1997). Finally, in an effort to influence public policy, Czinkota (1982) presented an internationalisation taxonomy consisting of six stages to enable firms to pursue effective government assistance based on their segmentation. The author found varying managerial and firm characteristics at different internationalisation stages (Morgan and Katsikeas, 1997).

Table 2.6 presents a comparison outline of the innovation-related framework and the stages approach of the Uppsala school. The frameworks share many similar features, with discrepancies regarding the number of stages presented by each author. However, the intention of the innovation-related stage frameworks is to provide taxonomies of export behaviour and as such, present a diverse set of firm profiles who seek internationalisation activities (Morgan and Katsikeas, 1997).

Table 2.6 Comparison of the Stages Approach and the Innovation-related Taxonomies

	<i>Johanson and Weidersheim-Paul (1975)</i>	<i>(Roberts, 1999)</i>	<i>Bilkey and Tesar (1977)</i>	<i>Cavusgil (1980)</i>	<i>Reid (1981)</i>	<i>Czinkota (1982)</i>	<i>Edvardsson et al.(1993)</i>
Internationalisation process ↓	Stage 1: The firm has no regular exports	Stage 1: Domestic operations	Stage 1: Management is uninterested in instigating an internationalisation strategy	Stage 1: Domestic marketing		Stage 1: Uninterested firm	
			Stage 2: Management is willing to fill unsolicited orders, but makes no effort to explore the feasibility of active exporting		Stage 1: Export awareness	Stage 2: Partial interest	Stage 1: Prospecting The firm adopts an entrepreneurial strategy to seek international opportunities through relationships and experiential knowledge
			Stage 3: Management actively explores the feasibility of active exporting	Stage 2: Pre-export stage and information search	Stage 2: Intent to export	Stage 3: Exploration and information search	
	Stage 2: The firm commences exporting, usually through an agent	Stage 2: Domestically located exports	Stage 4: The firm exports on an experimental basis to psychologically close country	Stage 3: Experimental involvement in exporting	Stage 3: Exploration and trial of export	Stage 4: Experiential exports	Stage 2 : Introduction Strengthening activities within chosen geographies to investigate prospecting opportunities
		Stage 3: Transhuman and wired exports	Stage 5: The firm is an experienced exporter	Stage 4: Active involvement and direct exporting	Stage 4: Export evaluation		Stage 3: Consolidation Firm secures its position through technology and marketing
	Stage 3: Establishment of an overseas subsidiary	Stage 4: Development of an overseas presence	Stage 6: Management explores the feasibility of exporting to other more psychologically distant countries	Stage 5: Committed involvement to exporting	Stage 5: Export acceptance	Stage 5: Experienced small exporter	Stage 4: Reorientation The firm adapts to local conditions
	Stage 4: Establishment of overseas production manufacturing	Stage 5: Production facilities established overseas				Stage 6: Experienced large exporter	

Source: Vandermerwe, S. and Chadwick, M., (1989) "The Internationalisation of Services". *The Service Industries Journal*, January, pp. 79 - 93. Erramilli, M. K., (1990) "Entry Mode Choice in Service Industries". *International Marketing Review*, Vol. 7, No. 5, pp. 50 - 62. Patterson, P. G. and Cicic, M., (1995) "A typology of service firms in international markets: an empirical investigation". *Journal of International Marketing*, Vol. 3, No. 4, pp. 57 - 83. Clark, T. and Rajaratnam, D., (1999) "International services: perspectives at century's end". *Journal of Services Marketing*, Vol. 13, No. 4/5, pp. 298 - 310. Lovelock, C. H., (1999) "Developing marketing strategies for transnational service operations". *Journal of Services Marketing*, Vol. 13, No. 4/5, pp. 278 - 289. World Trade Organisation (2002). *The General Agreement on Trade in Services (GATS): objectives, coverage and disciplines*, World Trade Organisation.

2.6.1 A Comparison and Criticism of the Innovation-related Frameworks with Traditional Internationalisation Literature

The concept of incremental and experiential knowledge-based internationalisation processes is more deeply embedded with the Uppsala School than the innovation frameworks. However, the innovation-related frameworks claim to be more suited to SMEs than the Uppsala School (Blomstermo and Sharma, 2003). Many inherent similarities are evident between the innovation-related frameworks and the Uppsala school. Both present internationalisation as an incremental process and maintain that objective and experiential knowledge and uncertainty impinge upon internationalisation (Morgan and Katsikeas, 1997) and therefore, take both a dynamic and behavioural view of the process (Blomstermo and Sharma, 2003). Nonetheless, through this similarity, the innovation-related models suffer much of the same criticisms as the Uppsala school. For example, theoretical aspects underpinning both Uppsala models and innovation-related stages are not applicable in the modern global economy. Time dimensions within the internationalisation process are ignored, as is how firms move from one stage to another (Anderson, 1993) and the models also fail to reflect the inherent cost of internationalisation (Eriksson et al., 1997).

Consequently, both bodies of literature fail to account for firm evolution between internationalisation stages, firms that retreat or reverse stages and firms that exhibit an ad-hoc approach to internationalisation (Morgan and Katsikeas, 1997). More importantly, however, is the recent belief that both the Uppsala School and the innovation-related frameworks fail to capture the essence and fail to explain comprehensively the internationalisation activities of small firms (Andersson et al., 2004). This is illustrated in the research findings of Bell (1995) who found both the

Uppsala and innovation-related stages an inappropriate construct to explain small software firm internationalisation because the linear nature of the models failed to illustrate the interactive nature of internationalisation and underlying factors influencing the process. Consequently, due to the inherent service characteristics within internationally traded software firms, this also implies that the Uppsala School and the innovation-related frameworks are unsuitable to other forms of small international service firms.

2.7 FOREIGN DIRECT INVESTMENT (FDI) THEORY

One of the most influential FDI theories is the Eclectic paradigm. Similar to the Uppsala School, the eclectic theory was developed in the 1970s and evolved as the eclectic paradigm in the late 1980s. The paradigm presents a synthesis of several theories, as opposed to being an original theory of the determinants of FDI. The paradigm is based on transaction cost analysis, as developed by Williamson in 1985, (Johanson and Vahlne, 1977; Dunning, 1980; Kogut, 1983; Anderson, 1997; Coviello and McAuley, 1999; Axinn and Matthyssens, 2001a; Whitelock, 2002) in conjunction with fundamental aspects of industrial organisation theory, internalisation theory (Axinn and Matthyssens, 2001a; Weisfelder, 2001) and the resource-based view of the firm (Anderson, 1997; Weisfelder, 2001).

2.7.1 The Foundations of the Eclectic Paradigm

Transaction Cost Analysis (TCA) states that when transaction costs reach a certain point, the firm opts to internalise activities. Internalisation means that operations previously undertaken outside the firm are brought under internal control (Morgan and

Katsikeas, 1997; Malhotra et al., 2002), particularly where firms engage in production of highly technical products or services that incur high transaction costs (Johanson and Vahlne, 1990). Transaction cost analysis postulates that firms seek overseas entry on a least cost basis (Brouthers et al., 1999). The first assumption of TCA is that all markets operate competitively. Where there is little threat of replacement within the market, transaction costs increase, prompting a requirement for relationship supervision and negotiation within the market (Whitelock, 2002).

Industrial Organisation Theory assumes that operating internationally is costlier than domestic operations. Therefore, the firm should seek to offset these costs through factor and product market imperfections overseas (Axinn and Matthyssens, 2001a; Weisfelder, 2001). Despite offering an explanation as to why multinational enterprises succeed in overseas markets, industrial organisation theory fails to account for firms that engage in foreign direct investment (Lizondo, 1991)¹. Perhaps this is attributable to the fact that industrial organisation theory ignores the role and influence of management upon the firm and industry conditions, which is surprising given that firm-specific factors are proven to exert a greater influence on firm profitability than industry effects, particularly in the case of small to medium firms (Caloghirou et al., 2004).

Internalisation theory is ingrained in classic economic literature and is concerned with consideration of circumstances and conditions that prompt the synchronisation of activities under internal firm management as opposed to external coordination by market forces (Buckley and Casson, 1976)². Therefore, internalisation theory seeks to

¹ (*Op. Cit.*) Weisfelder, C. J. (2001), Internationalization and the Multinational Enterprise: Development of a Research Tradition. In: Axinn, C. N. and Matthyssens, P. (Eds.), Reassessing the Internationalization of the Firm, Advances in International Marketing Vol. 11 Elsevier Science, Oxford, pp. 13 - 49.

² (*Op. Cit.*) Ibid.

explain why firms choose to extend activities across borders as opposed to a reliance on cross-border markets (Weisfelder, 2001) due to government intervention or market uncertainty (Axinn and Matthyssens, 2001a).

Although these theories seek to describe foreign production and foreign direct investment, the underlying concept of each differs. Consequently, the eclectic paradigm emerged as a framework to encompass these theories (Weisfelder, 2001; Malhotra et al., 2002) in explaining why firms seek production overseas in the form of foreign direct investment (Dunning, 1988) and is seen as an improvement over TCA due to the inclusion of location factors (Brouthers et al., 1999).

2.7.2 The Eclectic Paradigm

The Eclectic paradigm primarily evaluates or predicts decisions to engage in foreign direct investment (FDI) through consideration of ownership, location and internalisation factors (OLI) (Dunning, 1980; Kogut, 1983; Erramilli, 1990; Rugman and Verbeke, 1992; Brouthers et al., 1999; Coviello and McAuley, 1999; Egelhoff et al., 2000; Axinn and Matthyssens, 2001a, 2001b; Randoy and Dibrell, 2002; Whitelock, 2002). The examination of OLI factors seeks to minimise transaction costs and choose the optimal structure for the firm (Brouthers et al., 1999; Coviello and McAuley, 1999). Through consideration of benefits and limitations of the approach, firms choose internalised or externalised business strategies, while seeking to reduce transaction costs and exploit advantages of internalising markets (Buckley et al., 1991).

Ownership factors are technological advantages (Johanson and Vahlne, 1990) and firm specific know-how or assets (Buckley et al., 1991; Rugman and Verbeke, 1992;

Anderson, 1997; Dunning, 2000, 2000a) which are usually reflected in firm size and experience (Anderson, 1997; Randoy and Dibrell, 2002). However, ownership advantages may be location bound, meaning their greatest benefit is derived in a particular place. Thus location-bound advantages are not easily transferred (Rugman and Verbeke, 1992). Consequently, it is important that the firm recognises which advantages are location-bound or otherwise unexpected costs may be incurred by the firm (Rugman and Verbeke, 1992). Alternatively, ownership factors could be used to offset initial internationalisation costs (Buckley et al., 1991). For example, experiential knowledge used as a firm specific advantage enables firms to offset risk and reduce internationalisation decision uncertainty.

Location factors concern structural and transactional advantages (Johanson and Vahlne, 1977; Rugman and Verbeke, 1992; Dunning, 1998, 2000, 2000a) and are sometimes termed as the “where” of production or indigenous country advantages (Kogut, 1983). Important determinants of the location decision are; transport costs, existence of tariffs and government policy (Benito and Gripsrud, 1992). These factors determine the firm’s location decisions based on the affluence of the target country or market (Buckley et al., 1991; Anderson, 1997). As such, the presence of favourable location factors will prompt a strategy of FDI (Erramilli, 1990).

Internalisation advantages facilitate firms to surmount buyer uncertainty and allows subsidiaries to coordinate collusion or cooperation opportunities (Buckley et al., 1991; Dunning, 1998, 2000, 2000a). Internalisation therefore, may act as protection against proliferation of brand image due to licensing as the firm could internalise operations through the use of firm specific or ownership advantages (Buckley et al., 1991) in order

to offset this risk. However, Erramilli (1990) argues that where a firm possesses internalisation factors, there is a greater propensity to engage in exporting or foreign direct investment (FDI). Moreover, Brouthers et al (1999), on the basis of a previous study, cite empirical evidence to support the eclectic paradigm as a construct to explain the entry mode choice of US software firms. The research found that OLI advantages grew as the firm initiated more integrated entry modes, which subsequently resulted in increased operational efficiency (Brouthers et al., 1996; Brouthers et al., 1999).

2.7.3 The Eclectic Paradigm and Traditional Internationalisation Theory

Compared

The Uppsala school considers internationalisation stepwise and incremental, whereas the eclectic paradigm suggests firms seek to discover optimal location choices based on “discrete rational choices” as opposed to opting for a process of cultural learning (Benito and Gripsrud, 1992). Additionally, the eclectic paradigm is concerned with why firms engage in overseas investment, as opposed to the approach of the Uppsala School and the innovation-related frameworks, which focus on how the process occurs (Weisfelder, 2001). The eclectic paradigm is rooted in traditional trade theories (Weisfelder, 2001) with a focus on the resource-based view of the firm. The Uppsala school also incorporates the resource-based view of the firm, yet presents a behavioural view of internationalisation. However, the rational and opportunistic nature of the eclectic paradigm (Johanson and Vahlne, 1990; Anderson, 1997; Coviello and McAuley, 1999; Axinn and Matthyssens, 2001a; Whitelock, 2002) is considered static due to an inherent assumption that decision makers are well informed from the outset of internationalisation activities. Rather than adopting a behavioural focus, the eclectic paradigm relies on a combination of rational theories that assumes that decision makers

make rational decisions (Whitelock, 2002). However, the selection of an optimal location for the company may not always be feasible due to real world complexity, uncertainty, the “bounded rationality of decision makers” and other factors which impinge upon location choice (O’Farrell et al., 1998).

Moreover, the eclectic paradigm is limited in its singular focus on the firm (Anderson, 1997; Whitelock, 2002), does not consider the impact of competitors and has a myopic focus on cost-based information (Whitelock, 2002). The paradigm suffers from inter-relatedness between the OLI variables, as overlapping makes clear separation of each variable for analysis and interpretation difficult (Anderson, 1997; Malhotra et al., 2002), particularly since the paradigm is offered as a three construct model. For example, the benefits of an internalisation strategy may be difficult to quantify (Buckley, 1988; Ghauri, 1990) as double counting could occur with the presence of both ownership and internalisation factors. However, Dunning (2001) argues that the eclectic paradigm was never destined to offer a full and complete explanation of the different kinds of international production, but functions as a methodology and a range of generic variables which serve to explain overseas investment (Dunning, 2001). Nonetheless, the paradigm is too complex to examine in a holistic manner. Randoy and Dibrell (2002) maintain it must be treated as a classification of FDI determinants rather than a paradigm in itself. As such, neither the eclectic paradigm or transaction cost analysis serve as clear constructs to illustrate the internationalisation process as a learning process, particularly as international expansion is difficult to plan in advance (Eriksson et al., 1997). Despite research which argues the applicability of the eclectic paradigm to services, Axinn and Matthyssens (2001b) maintain that the eclectic paradigm and associated theories do not account for service intangibles, due to a production orientated

perspective. Similarly, rational economic analysis maintaining that firms move from low-cost, low-risk exporting strategies to high-risk international activities (Cavusgil, 1990; Rialp and Rialp, 2001) in the form of overseas production facilities (Jones, 1999) should be questioned, as the eclectic paradigm suffers from lack of recognition of dynamic SME behaviour (Rialp and Rialp, 2001).

Consequently, traditional internationalisation theory and foreign direct investment theory may longer be appropriate in the context of the modern global economy. This literature, though diverse, fails to embrace rapid internationalisation or firms who internationalise from inception. The incremental learning approach of the Uppsala school and innovation-related stages frameworks and the narrow conception of foreign direct investment through the eclectic paradigm, clearly fail to provide adequate explanations of such internationalisation activity. As such, an alternative approach is needed in the form of the network approach and international entrepreneurship. The following sections outline these theories and their suitability for the examination of small firm internationalisation processes.

2.8 THE NETWORK APPROACH

The network perspective has emerged as an alternative perspective to traditional theories (as presented in Sections 2.4 to 2.7), due to the growing dissatisfaction with traditional theories of internationalisation and their applicability to the context of small to medium size firms (SMEs) (Rialp and Rialp, 2001; Loane et al., 2004). This approach is based on theories of social exchange and resource dependency and concentrates on non-hierarchical systems where firms seek to strengthen and maintain

positions within international networks (Coviello and McAuley, 1999; Rialp and Rialp, 2001). International networks comprise relationships with customers, distributors, suppliers, government and competitors (Johanson and Mattsson, 1988; Rialp and Rialp, 2001; Chetty and Campbell-Hunt, 2003).

2.8.1 The Network Approach Explained

The network approach challenges incremental internationalisation concepts by suggesting that formal and informal relationships have a profound effect on firm internationalisation, through facilitation of international opportunities and shaping internationalisation through peripheral nets of formal and informal relationships *vis-à-vis* market expansion and development, diversification and product development, entry mode and market choice (Coviello and Munro, 1997; Malhotra et al., 2002; Chetty and Campbell-Hunt, 2003). Therefore, the network approach offers an improved understanding of the internationalisation process through a focus on knowledge and information (Hadjikhani, 1997; Chetty and Campbell-Hunt, 2003). The network approach provides a valuable insight into the dynamics of the internationalisation process, through a recognition of the link between internationalisation and strategic decision making (Rialp and Rialp, 2001). SMEs can overcome size constraints and lessen dependencies on internal resources. Consequently, through engaging in network relationships, firms can increase their propensity to engage in internationalisation activities (Coviello and McAuley, 1999; Lu and Beamish, 2001; Rialp and Rialp, 2001; Chetty and Campbell-Hunt, 2003). Firms are seeking international expansion through international extension and international penetration (Johanson and Mattsson, 1988; Jaklic, 1998; Rialp and Rialp, 2001). Firms choose to establish positions and increase resource commitments within new international networks or to consolidate an

internationalisation position within an existing network. Furthermore, the firm may create opportunities to engage in international integration through increased harmonisation of network positions (Rialp and Rialp, 2001). Investment in the form of tangible and intangible assets and inter-firm complementarity is stressed, in order to derive maximum benefit from network relationships (Sharma and Johanson, 1987; Johanson and Mattsson, 1988). These strategies and the extent to which these activities are coordinated determines firms' degree of internationalisation (Johanson and Mattsson, 1988). Table 2.8.1 distinguishes between four types of "international firm situations". The early starter firm has few or irrelevant relationships with foreign firms and consequently, the network possesses little knowledge regarding foreign markets (Johanson and Mattsson, 1988; Hadley and Wilson, 2003). International expansion occurs using agents or exporting to nearby markets, similar to the methods suggested by the Uppsala Model. The lonely international means the firm has accumulated some international experience and is isolated from the rest of the network. The late starter engages in international activities to sustain relationships within network firms that have already sought international expansion (Hadley and Wilson, 2003). The international among others is a situation where the entire network or industry is highly internationalised (Johanson and Mattsson, 1988; Hadley and Wilson, 2003).

Table 2.8.1 Four Categories of International Firm

Degree of internationalisation of the firm	Degree of internationalisation of the market (the production net)		
	Low		High
	Low	The early starter	The late starter
	High	The lonely international	The international among others

Source: Johanson, J. and Mattsson, L.-G. (1988), Internationalization in Industrial Systems - a Network Approach. In: Hood, N. and Vahlne, J.-E. (Eds.), *The Internationalization of the firm: A reader*, Academic Press, San Diego, pp. 303-322: 310.

Several studies have been undertaken to prove the applicability of the network approach to service firms (Sharma and Johanson, 1987). In a study of technical consultancy firms, Sharma and Johanson (1987) highlighted that existing business networks proved a valuable source of experiential knowledge during internationalisation (Sharma and Johanson, 1987; Blomstermo and Sharma, 2003). Coviello et al., (1998) suggest that network relationships provide a distinct competitive advantage to international software firms. Additionally, Bell (1995, 1997) conducted a cross-cultural study of the internationalisation process and export-related problems of Irish, Finish and Norwegian software firms. The author discovered evidence of non-linear and non-incremental internationalisation contradicting Uppsala school approaches, yet found support for the Network Approach, as the internationalisation processes of Irish software SMEs was dependent upon an established network of interfirm relationships (Bell, 1995; Coviello and McAuley, 1999). However, as the author did not examine these relationships in detail, Coviello and Munro (1997) undertook a extension of Bell's (1995) study to determine the influence of network relationships on the internationalisation process of small software firms. The study established that respondent software firms display stages of internationalisation activity within a network perspective with the following characteristics:

- ❖ Software firms have an international orientation from inception.
- ❖ Relationships are established with larger firms in the first year of operation to facilitate product development and initial entry to psychically close countries.
- ❖ These relationships facilitate the development of a network of formal and informal relationships over time, which provide market information and the potential of further internationalisation growth.

- ❖ Increased international market visibility is guided by these growth activities. Furthermore, firms gain improved international confidence, management capabilities, market and relationship experience.
- ❖ This international experience results in strong international market performance. However, at this point, the firm may begin diversification activities, seek new markets or establish an overseas presence independently of network relationships. This in turn may lead to an acquisition by another firm. Alternatively, network relationships may exert a continuing influence on the firm, thus restricting international growth to the network of initial relationships.

2.8.2 A Comparison of the Network approach and Traditional Internationalisation Literature

Advocates of the network approach believe it superior to the Uppsala school and innovation-related frameworks through consideration of intermediate communication, extensive knowledge interaction and co-ordination activities. The network may facilitate the firm's internationalisation strategy through supplying information regarding foreign markets, offering potential business agreements abroad, or helping network members seek buyers abroad (Johanson and Mattsson, 1988; Majkgård and Sharma, 1998; Sharma and Blomstermo, 2003). Similarly, the firm can overcome psychic distance by engaging in network relationships or through recruiting personnel with international experience. This serves to offset risk and facilitates the "leapfrogging" of traditional stages of internationalisation as outlined in the Uppsala stages model (Coviello and Martin, 1999). The network approach offers a multilateral view of the internationalisation process as opposed to the unilateral perspective of the

Uppsala Stages and innovation-related frameworks (Rialp and Rialp, 2001). This is attributable to an emphasis of firm and market relationships, as opposed to the internal development of firm knowledge and resources (Fletcher, 2001; Hadley and Wilson, 2003), analysis of the network itself, with a focus on relationships which surround the firm (Ford, 2002). Nonetheless, an integrated stages and network approach framework presents a modern view of the internationalisation process, as demonstrated by Coviello and Munro (1997), which suggests the merit of an integrative approach to the examination of internationalisation processes. In comparison to the eclectic paradigm, the relational approach of the network perspective considers internationalisation as a function of inter-related firm relationships (Coviello and McAuley, 1999; Malhotra et al., 2002) as opposed to firm specific advantages. The eclectic paradigm does not consider the influence of relationships upon FDI or internationalisation but takes a more rational view of the phenomenon (Coviello and Martin, 1999; Coviello and McAuley, 1999) and both the eclectic paradigm and the Uppsala school are considered too static to recognise the role of cooperation, strategic relationships and management in the internationalisation process (Axinn and Matthyssens, 2001b).

2.8.3 Criticism of the Network Approach

Despite seeking to overcome the criticism against incremental internationalisation, the network approach is limited in its predictive ability (Malhotra et al., 2002), it has been criticised for its lack of a core theory (Hoang and Antoncic, 2003) and does not account for firms who do not engage in network relationships (Malhotra et al., 2002). Moreover, there is lack of explanation of how firms travel from one situation to another. Additionally, the approach emphasises the production network as a driver of internationalisation activity as opposed to firms and customers (Andersson, 2002).

More importantly, a focus on network structure as opposed to the processes that occur within that structure fails to capture the essence of the internationalisation process of individual firms. The propensity of high technology firms to operate in niche markets, with little international and domestic competition calls for a shift of research focus back to individual firms and surrounding relationships. However, these relationships are often initiated and cultivated by the firm founder/manager as opposed to a network of relationships and not all firms will share a united interest in the stabilisation and integration of cooperative relationships (García-Canal et al., 2002). Consequently, the unit of analysis adopted in researching network approaches regarding small firms should concentrate on the role of the entrepreneur as opposed to the network as a whole and consider the impact of industry, firm effects and the political economy upon the internationalisation process, particularly evident in the context of Irish indigenous software firms.

The network approach to internationalisation, as with traditional approaches to internationalisation, are criticised for non-recognition of how high technology and service firms internationalise (Coviello and Munro, 1995; Fletcher, 2001) and may provide a partial and misleading account of the export development process (Leonidou and Katsikeas, 1996). Each of the theories are applicable in a certain context, this context however has changed (Axinn and Matthyssens, 2001a). Consequently, research which seeks to yield insights into the internationalisation process and the influence of surrounding relationships upon this process should encompass these concerns. Therefore, the following section introduces the concept of international entrepreneurship, which has become an increasingly popular method of analysing the internationalisation process of modern small firms (Oviatt and McDougall, 1999; Fillis,

2001) who do not prescribe to traditional internationalisation processes of modern small firms who do not prescribe to the internationalisation process advocated by traditional internationalisation literature.

2.9 INTERNATIONAL ENTREPRENEURSHIP

The alternative paradigm of international entrepreneurship has become an increasingly popular method of analysing the internationalisation process. The concept of entrepreneurship is multifaceted, as it overlaps with several other domains of strategic management and is seen from differing perspectives. International entrepreneurship however, has emerged as a concept which seeks to understand the entrepreneurial activity of small firms in international markets (McDougall and Oviatt, 2000) and is defined as “a combination of innovative seeking behaviour that crosses national borders and is intended to create value in organisations” (Oviatt and McDougall, 1994; McDougall and Oviatt, 2000:903). Therefore, international entrepreneurs may not consider international expansion as an obstacle, but rather as an opportunity waiting to be exploited (Madsen and Servais, 1997). Within the international entrepreneurship perspective, lies the theory of international new ventures, which pertains to firms who “from inception, seeks to derive significant competitive advantage from the use of resources and sale of outputs in multiple countries” (Oviatt and McDougall, 1994:49).

2.9.1 International New Ventures

Sometimes referred to in the literature as “Born Global”, “committed internationalists”, or “internationally focussed knowledge-intensive firms” (Loane et al., 2004), the concept of international new ventures (INVs) was introduced by Oviatt and McDougall

(1994), following an empirical investigation of twenty four internationalised firms who failed to exhibit forms of incremental internationalisation proposed by traditional internationalisation theory (McDougall et al., 1994; Madsen and Servais, 1997). Based on further empirical work, other authors have concurred with this assumption (Rialp et al., 2005) and have cited the Uppsala stages approach in particular, as an inadequate framework to explain the internationalisation process of INVs. Welch and Luostarinen (1988) found that small English firms, established Swedish firms and Australian start-up firms omitted stages and quickly sought to engage in foreign direct investment. Similarly, Bell (1995) found the stages approach did not sufficiently describe the internationalisation process of Irish, Norwegian and Finnish software firms.

2.9.2 The Characteristics of International New Ventures

In a general sense, the emergence of the international new venture phenomenon in international business is characterised by trends such as new and changing market conditions (Madsen and Servais, 1997), globalisation of markets (Knight and Cavusgil, 2004) the development and proliferation of technology and people capabilities (Knight and Cavusgil, 2004). More specifically, the characteristics which have prompted the emergence of the international new venture phenomenon are as follows³:

- ❖ An inherent innovative nature and managerial mindset to seek, serve and support international markets, through an international and entrepreneurial orientation through which to pursue a collection of diverse international

³ These characteristics are synthesised from extant literature pertaining to the critical success factors and antecedents of international new ventures by: Rennie, M. W., (1993) "Born Global". *McKinsey Quarterly*, Vol. 4, pp. 45 - 52, Knight, G. and Cavusgil, S. T. (1996), the Born Global Firm: A Challenge to Traditional Internationalization Theory. In (Eds.), *Advances in International Marketing*, Advances in International Marketing Vol. 8 JAI Press, Greenwich, Madsen, T. K. and Servais, P., (1997) "The Internationalization of Born Globals: An Evolutionary Process". *International Business Review*, Vol. 6, No. 6, pp. 561 - 583, Bell, J. and McNaughton, R., (2000). *"Born Global" Firms: A challenge to Public Policy in support of Internationalization*, Paper presented at Marketing in a Global Economy, AMA, Buenos Aires, Argentina, July, Moen, Ø. (2002) "The Born Globals. A Generation of Small European exporters". *International Marketing Review*, Vol. 19, No. 2, pp. 156 - 175, Knight, G. and Cavusgil, S. T., (2004) "Innovation, organizational capabilities and the born-global firm". *Journal of International Business Studies*, Vol. 33, pp. 124 - 141, Knight, G., Madsen, T. K. and Servais, P., (2004) "An inquiry into born-global firms in Europe and the USA". *International Marketing Review*, Vol. 21, No. 6, pp. 645 - 665.

strategies and drive international performance based on experiential knowledge of firm founder or founders and recognition of limited potential of domestic markets.

- ❖ The increasing role of niche and internationalised markets, coupled with a greater requirement for specialised products and technological advancements permitting the small-scale production of complex components.
- ❖ The increased role of information technology in the provision of low cost information and overseas management functions and the internationalisation of technology, tools and knowledge, which provides opportunities for technology transfer overseas.
- ❖ The recognition of inherent small firm characteristics in terms of responsiveness, innovation, adaptability and flexibility and the emergence of global networks as a facilitating agent for reciprocal relationships with strategic partners overseas.
- ❖ The possession of unique and inimitable knowledge to retain sustainable competitive advantage and a degree of flexibility and dexterity to strategically manipulate limited organisational resources and global technological competence to facilitate the development of unique and quality products for niche markets.
- ❖ The development of strong interfirm relationships to facilitate the gathering of market information, make contact with foreign suppliers, deepen relationships within current markets and seek new clients.

It appears that INVs tend to grow at increased rates than domestic new ventures (Andersson et al., 2004). This could be attributable to a recognition that hostile

domestic markets act as a catalyst for rapid internationalisation activities (Chetty and Campbell-Hunt, 2003) and that many INVs engage in strategic alliance and partnering activities (Oviatt and McDougall, 1994). Moreover, the ability of firms to internationalise and succeed from inception is related to inherent firm capabilities (McDougall et al., 1994; Zahra et al., 2000; Knight and Cavusgil, 2004). These capabilities in turn, lead to sustainable innovation, knowledge creation and competency development, resulting in superior firm performance and success in international markets (Knight and Cavusgil, 2004). Moreover, the experiential knowledge and global outlook of the firm founder serves as a contributory factor in the initiation of rapid internationalisation activities. This experiential knowledge means that the firm founder and/or firm staff perceive less uncertainty in international markets (Madsen and Servais, 1997). More recently however, it has been argued that born global (international new venture) characteristics may not be solely restricted to start-up firms, as being born global may be considered a strategy through which internationalisation is used improve firm value, as opposed to being a form of organisation (Bell and McNaughton, 2000). In an empirical study of internationalising SMEs in UK regions (Ireland, Northern Ireland, England and Scotland) and New Zealand, Bell and McNaughton (2000) discovered that well established, domestically focussed firms may also exhibit rapid internationalisation, attributable to a fundamental or critical change within the firm, which stimulates the firm into seeking foreign markets. This form of firm is termed as a “born-again global”.

2.9.3 A Discussion of Traditional Internationalisation Literature, FDI Theory, The Network Approach and International New Ventures

The international entrepreneurship literature presents several salient differences to internationalisation approaches prescribed to by traditional internationalisation theory, foreign direct investment theory and the Network Approach. The most fundamental challenge to traditional internationalisation literature is that International New Ventures (INVs) do not follow incremental internationalisation (Jones, 1999; Bell and McNaughton, 2000; Chetty and Wilson, 2003; Chetty and Campbell-Hunt, 2004). Many INVs seek international expansion without consideration of domestic operations, consider psychic distance an irrelevant concept and tend to engage in domestic market production (Jones, 1999; Bell and McNaughton, 2000; Chetty and Campbell-Hunt, 2004). This negates suppositions of both the Uppsala School and innovation-related frameworks concerning gradual, incremental and stepwise internationalisation commencing with a complete domestic market orientation, subsequent to overseas expansion to psychically distant countries followed by the establishment of overseas production facilities (Johanson and Weidersheim-Paul, 1975; Bilkey and Tesar, 1977; Johanson and Vahlne, 1977; Loane et al., 2004). Furthermore, traditional internationalisation literature and FDI theory does not place an emphasis on founders' previous international experience. INV initiators, however, tend to have accumulated extensive internationalisation experience in international markets (McDougall et al., 1994; Madsen and Servais, 1997; Chetty and Campbell-Hunt, 2004; Loane et al., 2004).

INVs consider internationalisation activities as a structured and planned part of firms' overall business strategy. Traditional approaches to internationalisation behaviour maintains that firms' international strategy is ad-hoc and opportunistic in nature (Bell

and McNaughton, 2000). Additionally, INVs consider information technology as a key enabler of global market reach (Loane et al., 2004). However, traditional internationalisation literature assumes that technology does not play a central role in overseas market development (Chetty and Campbell-Hunt, 2004). The recognition of experiential knowledge as a facilitator for international growth is supported by both INV theory and traditional internationalisation literature (Chetty and Campbell-Hunt, 2004). Therefore, as firms travel to successively distant markets, knowledge and technological learning is enhanced (Zahra et al., 2000).

Finally, both the INV literature stream and the network approach emphasise the importance of business relationships and strategic partnerships as part of the firm's overseas expansion (Sharma and Blomstermo, 2003; Chetty and Campbell-Hunt, 2004). Johanson and Mattson (1988) believe the internationalisation process a determinant of international interfirm networks and as such, analysis of this process must take these external relationships into account (Madsen and Servais, 1997). Therefore, the degree of coordination and the intensity of integration between firms will determine the firm's position within the network as; an early starter, late starter, lonely international or international among others (Johanson and Mattsson, 1988; Madsen and Servais, 1997; Rialp and Rialp, 2001). In the case of international new ventures, comparisons between the late starter and the international among others firm situations are evident, as firms seek to join existing overseas networks in the case of a late starter, or are "pulled" into international markets due to the highly internationalised nature of the industry (Madsen and Servais, 1997; Moen, 2002). However, Madsen and Servais (1997:573) argue that for the international new venture, the internationalisation process will "be much more individual and situation specific in international markets" in comparison to previous

internationalisation thought, due to the existence of joint ventures and strategic partnering activities. Consequently, the following section will examine the role and usefulness of such relationship activities, which are common features for small technology based firms, such as software (Bell et al., 2004).

2.10 STRATEGIC PARTNERSHIPS

The literature on internationalisation activity is beginning to recognise that international expansion is affected by multiple influences (Crick and Spence, 2004) through an increasing emphasis on the role of social and strategic partnering activities to the internationalisation process (Harris and Wheeler, 2005), where firms build linkages with industry players, such as government, overseas agents and other firms. The strategic partnering process consists of the development of cooperative agreements or arrangements, necessitating connections and linkages in the utilisation of resources and/or authority mechanisms from independent firms, in order to jointly accomplish individual firm objectives (Parkhe, 1993). Whether intended or not, the development of these partnerships are an important element of the firm's "strategic foundation" (Welch and Welch, 1996), whilst permitting firms to supplement strategic "blind spots" in internationalisation activities (Welch and Welch, 1996). As Elmuti and Kathawala (2001:207) note, strategic partnering activities are "for many small companies the only way they can stay competitive and even survive in today's technological advanced, ever-changing business world" as strategic partnering is seen as an essential ingredient in international firm strategy (Duysters and Hagedorn, 1996). Though differently termed in the literature (e.g. partnerships or alliances) (Frankel et al., 1996), strategic partnering activities are increasingly popular methods of conducting business (BarNir

and Smith, 2002) in overseas markets, due to the globalisation of business environments and requirements to compete in several markets simultaneously (Aulakh et al., 1996). In other words, the development of strategic partnering arrangements stems from “greater geographic and psychological distances between buyers and sellers” (Crick and Spence, 2004:5).

2.10.1 Forms of Strategic Partnerships

Strategic partnering may be initiated with well-known and established firms (Kauffman, 1995), domestic firms (Lu and Beamish, 2001) or suitably knowledgeable local firms in overseas markets (Lu and Beamish, 2001; Majocchi and Zucchella, 2003; Park et al., 2004). These firms bring appropriate knowledge of local customer requirements and competition, international experience and other host country information to the partnership, thereby providing entry doorways into successive foreign countries or firms and diminishing the possibility of firms making mistakes in unfamiliar foreign markets (Lu and Beamish, 2001). Alternatively, where there is a high degree of internationalisation within the industry, firms may consider possible collusion opportunities with competing firms in overseas markets (Chetty and Wilson, 2003). García-Canal et al (2002) identify three forms of strategic partnering activities and cooperative internationalisation strategies; “one key global alliance”, “multiple global alliances” and “competence-building alliances”. A one key global alliance refers to a firm who coordinates its internationalisation activities with another firm, with the express aim of a planned global action. Multiple global alliances pertain to firms who establish independent partnership activities with firms in different countries in order to expand and consolidate internationalisation activities. Finally, competence-building alliances occur where the firm initiates several partnerships while seeking to improve

the firm's core competencies, through R&D coordination and other such strategies (García-Canal et al., 2002). In addition to these forms of strategic partnerships, there also exists marketing partnerships and technology partnerships (Das et al., 2003). Marketing partnerships tend to centre around marketing functions and include; promotion, distribution and customer service, whereas technology alliances involve the sharing of intellectual capital through research and development activities, licensing and technology transfer (Das et al., 2003). Therefore technology partnerships can create increased potential for reciprocal benefit, by reducing "duplicated investment", facilitating the sharing of tacit knowledge and reducing product development time (Park et al., 2004).

2.10.2 The Dynamics of Strategic Partnerships

There are different varieties and forms of strategic partnership arrangements and within these forms there are also differing levels of partner relations; from weak relationships, to strong close knit bonds between firms, both of which provide a variety of opportunities for each firm (Kanter, 1994). Kanter (1994) suggests that for the most productive strategic partnerships there are five levels of integration;

- ❖ Strategic integration involves ongoing contact between firm managers.
- ❖ Tactical integration brings management together to develop specific projects or co-marketing campaigns.
- ❖ Operational integration means that both firms have access to necessary information that enables day-to-day firm functioning.
- ❖ Interpersonal integration results from the development of strong interpersonal relationships between firms.

- ❖ Cultural integration requires that both firms have an awareness of cultural and interpersonal issues in order to resolve any conflicts in the relationship.

Consequently, Kanter's (1994) levels of integration serve to highlight that behavioural characteristics are significant to the success of strategic partnering activities. Firms which engage in higher levels of coordination activities are increasingly likely to have successful strategic partnerships with other firms, resulting in higher levels of trust, sincerity, identification of common goals and successful communication in the form of quality information exchange (Elg and Johansson, 2001; Kauser and Shaw, 2004). Therefore, building trust between firms is one of the most important aspects of strategic partnerships (Frankel et al., 1996; Elmuti and Kathawala, 2001). The underlying dynamics of this trust in interpersonal relationships is also based on learning (Steensma et al., 2000; Harris and Wheeler, 2005) and is directly influenced by national culture. In addition, issues of trust are also dependent upon people and the relationship between firms and managers (Elmuti and Kathawala, 2001). The dynamic of human relationships suggests this process is multifaceted and unpredictable, as strategic partnering activities obviously occur in social contexts (Eisenhardt and Schoonhoven, 1996; Steensma et al., 2000) and involve social networks, both of which facilitate the development and maintenance of strategic partnerships (BarNir and Smith, 2002). Strategic partnership development also hinges on management commitment to the activity. This commitment is affected by fears of loss of control (Elmuti and Kathawala, 2001), differences in management style (whether authoritarian or participatory), the delegation of responsibility and formal or informal control procedures (Parkhe, 2001). However, according to Kanter (1994) formal systems

should not control strategic partnerships, due to the underlying influence of interpersonal connections.

2.10.3 Benefits of Strategic Partnerships

The development of strategic relationships can facilitate overseas expansion, enable firms seek investment substitution in international markets (Kauffman, 1995) and aid firms overcome resource constraints through the sharing of equipment or other intangible assets (Lee et al., 2000; Lu and Beamish, 2001). Strategic partnering activities can also serve to minimise internationalisation barriers (Karagozoglu and Lindell, 1998; Lovelock, 1999; Zimmerman, 1999; Lu and Beamish, 2001; Fillis, 2004), and provide opportunities for service firms to seek synergistic associations with other firms who offer complementary specialities (Buckley et al., 1991; Kauffman, 1995; Karagozoglu and Lindell, 1998; Lovelock, 1999; Zimmerman, 1999; Lu and Beamish, 2001; Fillis, 2004; Park et al., 2004). Strategic partnerships contribute to the increased strength of firms operating in overseas markets through advantages of complementary expertise, competitive advantage and increased bargaining power (Lee et al., 2000). Furthermore, engaging in strategic partnering arrangements, facilitates; ease of entry into unfamiliar overseas markets through uncertainty reduction (Drago, 1997) and technology transfer, presents possible outsourcing opportunities, permits risk spreading and provides alternative methods of serving customers (Elmuti and Kathawala, 2001).

According to Kanter (1994), strategic partnerships must yield benefits for both parties irrespective of reasoning behind their initiation, as successful strategic partnerships go beyond mechanisms of exchange to the creation of collaborative value between parties. The development of strategic partnering is based on appropriate market opportunity,

clear expectations and requirements, an appropriate management structure and an understanding of the function of the partnership in the context of overall organisational objectives. The instigation of a strategic partnership arrangement may be of benefit in situations where the firm feels unable to acquire resources in foreign markets or because a local partner may control resources that the firm requires access to (Inkpen and Beamish, 1997). However, in most cases, the development of a strategic partnership is contingent upon the attractiveness of the firm to potential partners. According to BarNir and Smith (2002) these factors include having; financial resources, technological expertise, market position, reputation or attractive management or human resource practices. In return, the firm may then gain access to embedded knowledge or skills of their strategic partner (Inkpen and Beamish, 1997), permitting the smaller firm to increase market strength, visibility and credibility, placing the firm in a better competitive position overseas, while in turn permitting the firm to look outside their targeted niche market to other opportunities within that market without fear of competitive attack from its strategic partner (Lee et al., 2000).

Strategic partnerships can provide such functions as marketing, networking and the provision of knowledge (Harris and Wheeler, 2005) and since smaller firms generally suffer from resource constraints in overseas markets, such relationships make international expansion possible (Coviello and Munro, 1997; Jones, 1999; Harris and Wheeler, 2005). Forming a strategic partnership with another firm already present in a foreign marketplace is an "appealing alternative" to seeking entry alone (Elmuti and Kathawala, 2001). Therefore, strategic partnering means that smaller firms are empowered to carry out larger projects (Elmuti and Kathawala, 2001) with less financial commitment, as the financial burden of seeking new overseas markets may be too great

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for an individual firm to bear alone (Elmuti and Kathawala, 2001). Table 2.10.3 serves as a summary of the beneficial outcomes of strategic partnership arrangements in terms of adding value to the firm, building current business capability and defending market position.

Table 2.10.3 Outcomes of Strategic Partnerships

<i>Strategic Intent</i>	<i>Specific Alliance Outcomes</i>
Adding new value	Deliver broader service range
	Increase service quality
	Accessing innovation and incorporating into service offer
	Facilitating new product development
	Building distribution capability
Building current business capability	Building manufacturing capability
	Building purchasing capability
	Building finance capability
	Building business knowledge, expertise and skills
	Assessing new client groups
Defending market position	Assessing resources required for specific client groups
	Joint promotional activity
	Building barriers against new entrants
	Access resources to compete against major clients
	Offset impact of product substitutes
	Defend against environmental forces

Source: Adapted from Jarratt, D. G., (1998) "A strategic classification of business alliances: a qualitative perspective built from a study of small and medium sized enterprises". *Qualitative Market Research: An International Journal*, Vol. 1, No. 1, pp. 39 - 49. 47

2.10.4 Challenges within Strategic Partnerships

As relationships deepen between firms, they become increasingly complex (Selnes and Sallis, 2003) and may require incentives to maintain and sustain the relationship and ensure efficient knowledge transfer takes place (Nordberg et al., 1996). Strategic partnerships are susceptible to issues of relational risk if one firm exhibits opportunistic behaviour to the detriment of the partnership (Elg and Johansson, 2001; Elmuti and Kathawala, 2001). However, the reduction of opportunistic behaviour between parties may culminate in increased partnering activities, the development of mutual trust and appreciation and lead to a reduction in the cost of partnership conformity (Parkhe, 1993). Social control in the form of shared beliefs between parties, may serve to reinforce this trust and relationship building process (Aulakh et al., 1996). Therefore, successful strategic partnerships consist of delicate balance between issues of control and the requirement to maintain an amicable relationship between firms and managers (Kausser and Shaw, 2004). Furthermore, the tension between knowledge protection and knowledge sharing may be of concern between parties, particularly if the relationship is reliant on active information sharing and learning (Jordan, 2004). Similarly, the evaluation of the strategic partnership in financial terms is difficult, due to its intangible nature (Welch and Welch, 1996). Yet, gaining understanding of the processes through which firms learn from each other (Jordan, 2004) and obtaining regular feedback in relation to the short and long-term goals of the partnership, are appropriate methods of assessing partnership performance (Elmuti and Kathawala, 2001; Pietras and Stromer, 2001).

Finding appropriate and suitable strategic partners also poses a challenge to internationalising firms (Karagozoglu and Lindell, 1998; García-Canal et al., 2002) in

the form of goal conflicts between parties, disagreement regarding control divisions and cultural incongruity (Frankel et al., 1996; Elmuti and Kathawala, 2001; Lu and Beamish, 2001). Effective communication between parties is extremely important, yet language, cultural differences (Elmuti and Kathawala, 2001; Parkhe, 2001) and interfirm diversity may impinge upon the process (Parkhe, 2001). Finding appropriate strategic partners may also be a challenge in terms of servicing the needs of existing partners, while seeking new foreign partner opportunities (Moen et al., 2004), as strategic partnering activities can hold different levels of importance in domestic and international markets (Hastings and Perry, 2000). Additionally, firms are susceptible to instability, or an unplanned change within the partnership, which may also result from shifts in bargaining power between parties (Inkpen and Beamish, 1997). Similarly, size differences may result in one firm exerting negative power effects on the other (Elg and Johansson, 2001). Therefore, flexible arrangements in strategic partnering are particularly important (Pietras and Stromer, 2001), as partners often deal with changing, diverse environments and unforeseen circumstances (Aulakh et al., 1996). However, this implies that firms may have to surrender some strategic flexibility to ensure the partnership is successful (Frankel et al., 1996). As a result, strategic partnerships should be initiated for the right reasons, with a focus on cooperation and communication issues (Elmuti and Kathawala, 2001), to ensure a mutually beneficial outcome. As such, the success of strategic partnering activities lies in the instigation of mutually beneficial relationships, on the basis that future partnership advantages will outweigh the non-recoverable and substantial investments made by both parties (Parkhe, 1993; Eisenhardt and Schoonhoven, 1996), with clear recognition of; the partnership function, governance method, and the potential for future partnership conflict (Anslinger and Jenk, 2004).

2.10.5 Strategic Partnering in the Software Industry

Globalisation has resulted in firms which actively seek out new strategic partnering opportunities, as opposed to the identification of situations where the firm can exploit majority control (Narula and Hagedoorn, 1999). In the case of the smaller software firm, globalisation forces and a requirement to operate in niche markets may necessitate the instigation of strategic partnering arrangements in overseas markets, as “in order to compete in the growing international market, it will be increasingly necessary for firms to cooperate on a global level and continually build international relationships which will facilitate the process of global competition” (Elmuti and Kathawala, 2001:214), through the exploitation of the intrinsic advantages which strategic partnering can offer the internationalising software firm. Further to this, high technology-based firms (such as software firms) have demonstrated the use of relationships in sustaining international growth (Coviello and Munro, 1995; Jones, 1999; Spence, 2004) and competitive advantage (Spence, 2004), implying that strategic partnering relationships between firms are influential throughout the internationalisation process. A software firm’s strategic partner may permit the firm to offer a more complete solution to the end customer (Moen et al., 2004) and provide localisation or other development assistance. Consequently, it may be said that strategic partnerships have the potential to “change the strategic direction of the firm” (Harris and Wheeler, 2005:18), particularly with regard to international markets and the internationalisation process. Accordingly, strategic partnering activities should be considered “competitive weapons” in international software markets (Drago, 1997), because whether fleeting or long lasting, strategic partnerships are an integral part of international business competitive advantage (Kanter, 1994).

2.11 CONCLUSION

This chapter has served to illustrate the complexity of the internationalisation process of internationally traded service firms and as such, several conclusions as to the internationalisation process of these are evident. Firstly, the nature and unique characteristics of services will determine appropriate entry modes for internationally traded service firms in foreign markets. In the case of software, intangibility, separability, heterogeneity and "storability" characteristics and the classification of software as a hard service, offers the internationalising firm a choice of export, agency, management contracts or joint ventures as entry mechanisms into overseas markets.

Secondly, a review of the extant literature on the internationalisation process reveals that traditional internationalisation theory and foreign direct investment theory, though applicable in certain contexts, fail to provide adequate explanations of the internationalisation process of the internationally traded software firm, as theories which posit that firms internationalise on an incremental basis and fail to consider the effect of environmental and contextual factors upon the internationalisation process are questionable in the context of the modern global economy. Therefore, alternative perspectives of internationalisation in the form of international entrepreneurship and the network approach should provide more insight and clarification, through recognition of the dynamics of small knowledge intensive firms, the impact of environmental and contextual factors surrounding small software firms and the propensity of firms to engage in strategic partnering activities.

Since a firm's relationships can directly or indirectly influence overseas entry strategies and international growth (Coviello and Munro, 1995), it is reasonable to assume that an

extension of these relationships to strategic partnering activities will serve as facilitators of the internationalisation process, through international extension and the minimisation of internationalisation barriers. Knowledge gained from strategic partners could enable the firm to capitalise on overseas market knowledge and influence the strategic direction of the firm through increased foreign market presence, credibility by association, resource planning activities and introductions to potential local market partners. Consequently, firm commitment towards international markets is influenced by strategic partnering arrangements through informal relationships underpinning the process. Smaller software firms are prone to resource scarcity, competitive uncertainty, volatile environments and greater market and operational uncertainty. Therefore, the use of strategic partnering could facilitate greater access to customers, assist firms to enter new markets, reduce environmental and operational uncertainty and facilitate technology transfer. The next step is to discuss the context of the Irish indigenous software sector. The following chapter presents a review of the Irish software market, which incorporates indigenous and foreign software firms.

Chapter Three ~ Industry Review

3.0 INTRODUCTION

The previous chapter examined the literature regarding the internationalisation of service firms. This chapter presents an overview of the Irish software sector, which is composed of both indigenous and overseas firms. By describing the evolution of the sector, the breakdown of the market and market issues faced by Irish indigenous software firms, this chapter will illustrate the context of Irish indigenous software firms and includes data from interviews conducted with key informants from the National Software Directorate within Enterprise Ireland, The Irish Software Association (ISA) and Forfás.

3.1 THE EMERGENCE OF THE IRISH INTERNATIONALLY TRADED INDIGENOUS SOFTWARE INDUSTRY

Software is Ireland's second largest internationally-traded service (Crone, 2002), accounting for over 1.5 billion Euro in the 2002-2003 period (National Software Directorate, 2004). Since the 1990s, software has been recognised as one of fastest developing sectors of the Irish economy, eclipsing the United States in 1998 in becoming the largest software exporter in the world⁴ (Green, 2000; Crone, 2002). The variety of products and services within the Irish software market makes an analysis of the sector complex, particularly since the market is generally examined under the umbrella term of information and communication technologies (ICT) and software is bundled with other ICT goods and services (Price Waterhouse Coopers, 1999). Nonetheless, the emergence of Ireland as a software nation can be traced back as far as

⁴ In 1998 Irish software exports accounted for 34% of the global software market, 40% of packaged software and 60% of business applications software in Europe. (*Op Cit.*) IDA Ireland (1999) *Achieve European Competitive Advantage in Software*. IDA Ireland, Dublin.

the 1970s. At that time, unemployment resulted in high levels of emigration and population decline. As a strategy to deal with these issues, the government identified high-technology based industries as vehicles for growth and international tradability. This strategy involved the promotion of Ireland as an ideal base for overseas firms due to a highly educated and English speaking labour force, geographical location and low telecommunication costs. Furthermore, in the 1980s the government engaged in the provision of tax incentives to attract foreign direct investment (FDI) (Ó'Riain, 1997; Barry et al., 1999; Gallen, 2001; O'Malley and O'Gorman, 2001; Tessler et al., 2003; Torres and Murray, 2003). The IDA offered incentives such as low tax rates, government grants and a skilled workforce to entice foreign MNEs to locate in Ireland. There is a debate as to whether the influx of MNE software firms is directly or indirectly responsible for the emergence of the indigenous software sector (Gallen, 2001), as skilled Irish entrepreneurs sought to uncover and exploit niche markets, while concurrently servicing domestically-located MNEs and their subsidiaries overseas (Price Waterhouse Coopers, 1999). However, O'Malley and Egerat (2000) believe the development of Ireland's high-technology industry may be attributed somewhat to the influence of the overseas software base. Nonetheless, it appears in Figure 3.2 that indigenous and overseas firms have emerged as two distinct software bases, with both offering complimentary as opposed to competing skill sets.

"There has been a view that the multinationals are succeeding and all the indigenous will learn off them, but in terms of software in particular...it's very much the indigenous base companies who are generating new technologies...There's a huge amount of...process and...innovation, technology and management processes that the multinational base would have...where the indigenous would have very strong technology base competencies" (Forfäs, 2004a).

In the 1990s, Irish software firms largely supplied bespoke software services to local markets (Gallen, 2001). However, during this period, the increased availability of venture capital opportunities permitted a shift from service-based offerings to product-

based applications (Gallen, 2001) and Irish firms realised the benefits of internationalising due to limited domestic market size (National Software Directorate, 2004), experience gained in previous employment and recognition of opportunities to compete in international markets. Accordingly, an increasing number of companies sought overseas markets, mainly focussing on the UK and the USA (ICT Ireland, 2003b). Consequently, in the period from 1991 to 1993, indigenous software export activities increased by 88% and showed further improvement in the 1993 to 1995 period with a 95% export growth increase (National Software Directorate, 2004).

However, growth slowed somewhat from 1995 onwards in comparison to previous years, amounting to 58% and 25% respectively in the 1995 to 1997 and 1997 to 1998 periods. The 1998 to 1999 period highlighted a moderate growth increase, with exports rising to 40%. Nonetheless, 1999 signalled a difficult year as growth slowed to a low of 10% while 2000 showed a marked improvement in the form of a 47% growth increase (National Software Directorate, 2004). By the end of 2000, the Irish software industry had experienced one its most successful periods. Growth and profitability were on the increase, employment in the sector had grown, and the Government had highlighted an increased commitment to ensure the continued profitability of the sector and its contribution to the economy (Irish Software Association, 2000). The industry experienced strong entrepreneurial growth due to high levels of venture capital (The Irish Times, 2000a) with funds amounting to €48 billion being raised in Europe (an 89% increase on 1999) (Hot Origin, 2002) and internationalisation in the form of merger and acquisition activity (Irish Software Association, 2000).

Despite this recovery, growth suffered again in 2000 to 2001 with only a 2% growth increase (National Software Directorate, 2004). Consequently, the industry faced job loss and consolidation. Employee wages decreased and the number of university students undertaking computer science courses fell significantly (Irish Software Association, 2001). Firms undertook restructuring to deal with the economic downturn. The government responded in kind with further entrepreneurial allowances within the 2002 Budget, expanding the Business Expansion Scheme (BES), and Seed Capital schemes, hoping to encourage start-up and high-risk companies to overcome these economic challenges (Irish Software Association, 2002).

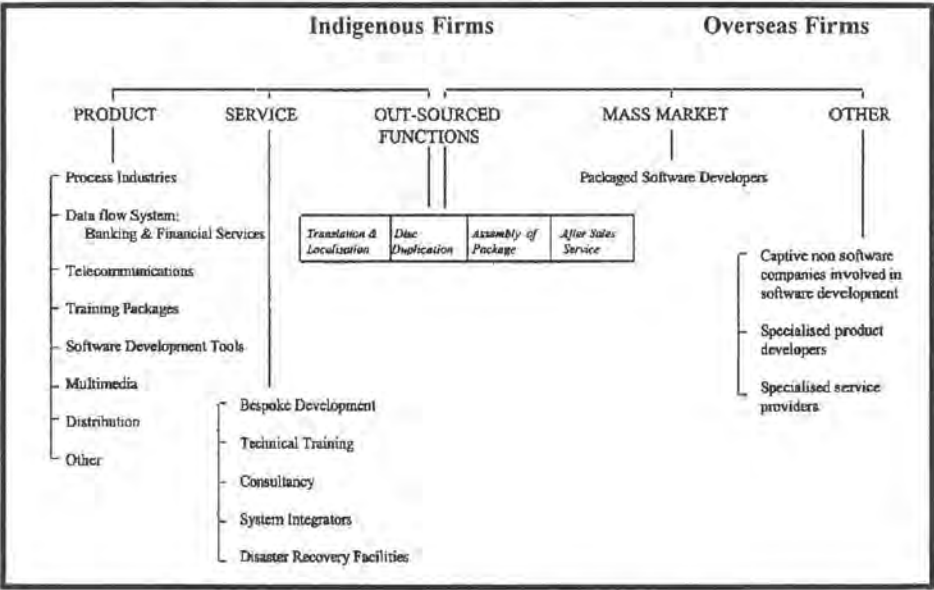
Despite a slight improvement, firms faced similar challenges in the 2002 to 2003 period with a decline of 16% for the first time in a ten-year period. Employment and revenue in the indigenous sector followed similar growth patterns to export activities in 2002 and 2003 (National Software Directorate, 2004). Fortunately, however, 2003⁵ signalled a return to growth from the previous three years. US spending within the sector increased and forecasts for 2004 returns remain positive (Hot Origin, 2004; National Software Directorate, 2004), albeit with a cautionary warning regarding the decreasing value of the dollar to the euro and the lack of US employment growth. Additionally, it is expected the Eurozone will only see GDP growth of 1.8% in the 2004 period, thereby providing a challenging environment for the sector. However, the inclusion of new accession countries within the region, coupled with the further development of 3G networks and data services should somewhat supplement these deficiencies (Hot Origin, 2004).

⁵ Charts 3.4a, 3.4b, 3.4c, 3.4d, 3.4e, 3.4f in appendix A, presents a full outline of employment, revenue and export growth activity for the 1991 to 2003 period within the Irish software market, incorporating statistics on both indigenous and overseas firms.

3.2 THE COMPOSITION OF THE IRISH SOFTWARE MARKET

According to Coe (1997)⁶, the Irish software sector consists of two “chains” of production and innovation, which are composed of software logistics and software localisation, carried out by overseas companies specialising in mass-market software production and indigenous software development firms with a niche market focus. This is highlighted in Figure 3.2, which outlines the division of the Irish software market by subgroups of indigenous firms who specialise in bespoke software development, consultancy and system integration and overseas firms, who mainly concentrate on the development of software for mass markets (O’Gorman et al., 1997; Crone, 2002).

Figure 3.2 The Composition of the Irish Software Market



Source: O’Gorman, C., O’Malley, E. and Mooney, J. (1997) Clusters in Ireland. The Irish indigenous software industry? An Application of Porter’s cluster analysis, National Economic and Social Council Dublin.

The classification in Figure 3.2 also shows that indigenous software product firms do not directly compete with local multinationals, but rather focus on niche system software and business application markets (O’Gorman et al., 1997; Price Waterhouse

⁶ (Op Cit.) Crone, M. (2002). *A profile of the Irish Software Industry*, Northern Ireland Economic Research Centre, Belfast.

Coopers, 1999; Arora et al., 2001; Crone, 2002). However, there remains a perception among indigenous firms of intense competition from other indigenous firms despite the fact that most indigenous firms operate in similar segments, yet distinct niche markets.

"When we started firms on the software directorate...we discovered...that every company we spoke to was convinced that every other company was a competitor...(but) we discovered straight away...that there was almost no competitors...there was hundreds of companies and they were all in separate niches" (National Software Directorate, 2004).

In 1999 Price Waterhouse Coopers compiled a comprehensive analysis of the Irish software market as part of the recommendations for ITS 2007. The report suggests seven sector classifications that provide greatest value in classifying the Irish software market regarding domestic and international competitive position and knowledge intensity (Price Waterhouse Coopers, 1999; Crone, 2002).

- ❖ **The Enterprise resource planning (ERP)** market consists of the development of software designed to streamline activities and processes in the form of customer relationship management (CRM) and supply chain management (SCM).
- ❖ Closely aligned to knowledge management, **data management** systems enable firms to compile and access large quantities of information to support decision-making, develop strong business and network relationships and provide competent customer care (Crone, 2002).
- ❖ **Systems software** comprises various system orientated products and services; including operating systems (e.g. Windows and UNIX), the management of networks and systems (dominated by such market players as Hewlett Packard and Sun Micro systems), and distributed computing (i.e. where two or more network based computer systems share application processing activities).

- ❖ **Software applications** are uniform software packages, typically available off the peg.
- ❖ **Computer languages** are tools to program or write software.
- ❖ The **consulting and bespoke development** market comprises a diversity of services including turnkey solutions and software consulting.
- ❖ **Localisation Manufacturing and Distribution of Software** involves the translation, packing and fulfilment of software for overseas local markets.

Crone (2002) and Ó'Riain's (1997) investigation of the Irish software market determined that the majority of overseas firms operating in Ireland are concerned with large-scale development of software, localisation and associated activities and technical support functions. In comparison, the indigenous software base concentrate on niche software market opportunity, due to intense MNE competition (Price Waterhouse Coopers, 1999; Crone, 2002).

3.2.1 The Composition of the Irish Indigenous Software Market

The Irish indigenous software sector comprises firms offering software products and those offering software services (Crone, 2002). Software services involve activities such as system integration services, bespoke software development and software/IT consultancy and are typically unique to each customer as opposed to selling standardised product copies. However, some services may necessitate writing and software (O'Gorman et al., 1997). Additionally, the increased proliferation of internet technologies has facilitated an increase in the number of service firms supplying a combination of both product and service activity (Enterprise Ireland, 1999). However, due to costs inherent in the provision of services to overseas markets, Irish development

agencies actively encourage indigenous software firms to concentrate on products as opposed to services, as the European market for product software is greater than for software services (O'Gorman et al., 1997) and products (compared to services) are more easily exported. As such, many indigenous software firms have evolved from a service offering to a product orientation (O'Gorman et al., 1997; Crone, 2002).

"The service bit is different, there's no doubt about that...that's why we encourage companies to be in product if possible. I mean if you're purely in services...you need a huge number of people to make it big or (be) like one of the Indian companies" (National Software Directorate, 2004).

Table 3.2.1 Specialisations of Irish Indigenous Software Firms in 1999

<i>Activities⁷</i>	<i>N</i>	<i>%</i>
Bespoke Software (customised development services)	300	58%
Software Products (i.e. applications)	227	44%
Internet-related Services (e.g. on-line services, Internet-access services, development of portals)	135	26%
Multimedia Services (e.g. outsourced video, desktop publishing, computer based techniques)	77	15%
Other Services (professional services including customer support)	76	15%
Localisation	70	14%
System Software Tools (e.g. CASE Tools, C++ or Java Compilers)	54	10%

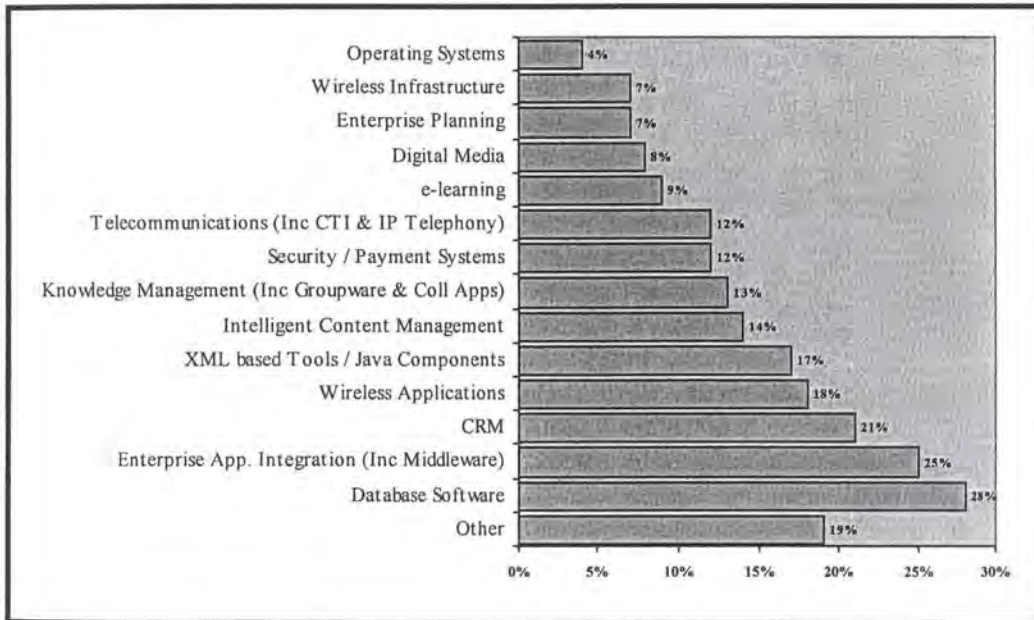
Source: Crone, M. (2002) *A profile of the Irish Software Industry*, Northern Ireland Economic Research Centre Belfast.

However, the primary focus of indigenous firms in Table 3.2.1 highlights the division of product and service activities and suggests the majority of indigenous software firms offer a combination of both products and services, as bespoke software services herald the greatest concentration closely followed by software applications. Interestingly, the number of firms engaging in localisation activities is lower than might be expected, because Ireland is considered a "hotspot" of localisation activity due to the large number of overseas firms that engage in localisation activities and the existence of

⁷ Some firms are included in more than one category.

indigenous firms who undertake service provisions to those firms, both domestically and internationally (Price Waterhouse Coopers, 1999; Crone, 2002). While Table 3.2.1 provides a broad outline as to the indigenous software segments, Figure 3.2.1 provides a more comprehensive breakdown as to the specialisations of indigenous firms in 2003. This data indicates that indigenous software firms are moving away from the traditional software markets favoured by indigenous firms, towards the software classifications identified by Enterprise Ireland in relation to ITS 2007 and the emergence of further niche market segments.

Figure 3.2.1 Specialisations of Irish Indigenous Software Firms in 2003



Source: Hot Origin. (2003). *Ireland's Software Cluster 2003: Winning Sales - Lessons from the frontline*. Available on-line at: http://www.hotorigin.com/htm_pages/reports/reports.htm:12.

3.2.2 Characteristics of the Irish Indigenous Software Sector

The indigenous Irish software industry heralds a number of unique attributes.

"First of all concentrating on a product for sale...rather than a service...you have to have a product to succeed...pick a niche...have a product that addresses the nation...that is able to do the job and then thirdly, have a...target export market" (National Software Directorate, 2004).

The National Software Directorate believes the success of the indigenous market overseas is based on the following characteristics.

- ❖ The majority of indigenous software firms concentrate on product offerings, while also deriving benefit from associated services.
- ❖ Limited domestic market size means that export markets are a priority for indigenous firms.
- ❖ Indigenous firms usually target niche markets and as such do not face direct MNE competition.
- ❖ The highly innovative nature of indigenous firms has resulted in the success of targeting overseas niche software strategies.
- ❖ Indigenous firms place a large emphasis on quality and quality processes (Gallen, 2001; National Software Directorate, 2004).

Furthermore, the majority of indigenous firms are founded as a result of founders' previous experience within a multinational environment (Hot Origin, 2004). This highlights that an entrepreneurial and international mindset is also key attribute of new indigenous software firms.

"Very dynamic, entrepreneurial, the market here in Ireland is very small...so the companies have to internationalise immediately... they can't rely on the Irish market. In fact very few companies have even a presence...in the Irish market, other than perhaps some of the telecoms (telecommunications companies)" (Irish Software Association, 2004).

This is evidenced in the fact that indigenous software firms are internationalising at a greater pace than manufacturing firms (Forfás, 2003). ICT Ireland report that in 2001, over eighty percent of Irish indigenous software firms undertook some form of internationalisation (ICT Ireland and IBEC, 2001b). Yet, a comprehensive data breakdown as to destinations of Irish software services exports is limited. It is evident, however, that the United Kingdom is Ireland's most significant European trading partner (Crone, 2002) representing fifteen percent of Irish software service exports

within the European Union (EU). Furthermore, joining European Monetary Union (EMU) has resulted in an increase of indigenous service exports within the Euro zone (Forfás, 2003). The majority of indigenous service exports are non-EU focussed, with the US as Ireland's largest software market (Crone, 2002: As seen in Table 3.2.2), increasing to represent over fifty percent of destination exports in 2003 (Forfás, 2003).

Table 3.2.2 Indigenous Software Destination Exports

UK	21%
Western Europe	28%
North America	43%
Far East	1%
Pacific Rim	3%
Other	4%

Source: Crone, M. (2002) *A profile of the Irish Software Industry*, Northern Ireland Economic Research Centre Belfast.

The US as an export market is favoured due to size, and global reputation.

"America is the definitive market for software, if you can sell in America you can sell anywhere...that would be the perception" (National Software Directorate, 2004).

Furthermore, many American firms are early technology adopters, which is an important reassurance for indigenous software firms who operate in niche markets.

"Primarily the export markets that they (indigenous firms) would look at is the US...because they are early adopters of technology, it's easier to sell to an American company because they are quick to take on technology, they are used to it themselves" (Irish Software Association, 2004).

However, in recent years an increased number of indigenous firms have looked to the UK, with larger firms considering the feasibility of internationalisation to Europe and Asia.

"That is interestingly changing over the last number of years and we are beginning to see more companies look to the UK markets and...some of the larger...companies in Europe and obviously Asia. But, Asia is a difficult market to crack at the moment; well it will be for the foreseeable future" (Irish Software Association, 2004).

In 2001, indigenous firms represented 16%* of the total number of firms operating in the Irish ICT⁹ sector. In addition, the National Software Directorate (2004), estimate that at the end of 2003, the indigenous software industry comprised over eight hundred and sixty indigenous firms, whose internationalisation activities accounted for almost €1.1 billion. Employment in the indigenous sector is almost equal to non-indigenous firms. In spite of this however, indigenous firms are much smaller, with less revenue than overseas firms.

"There's about a thousand software companies in Ireland, but only about seven hundred of them are indigenous. Interestingly...the employment is about equal...so...both employ around fifteen thousand. So, you've got three hundred employing fifteen thousand, so the indigenous sector is much smaller and that's a problem" (Irish Software Association, 2004).

In spite of this size imbalance, indigenous software firms increasingly account for the largest proportion of Irish internationally traded service exports, as seen in Table 3.2.2.1.

Table 3.2.2.1 Internationally Traded Service Export and Export Growth in Irish-owned Companies 1990 – 2002

	1990	1995	2000	2001	2002	Per Annum Change 1990 - 2002
	€M	€M	€M	€M	€M	%
Internationally Traded Services	236	299	1,444	1,700	1,698	17.9
Software Development	55	70	776	1,098	980	27.2
All Other Services	181	229	668	602	718	12.2

Source: Enterprise Strategy Group (2004). *Ahead of the Curve: Ireland's Place in the Global Economy*, Forfás, Dublin:16

The vast majority of indigenous software firms are located in the Dublin region (National Software Directorate, 1999; Price Waterhouse Coopers, 1999; Green, 2000; Gallen, 2001; O'Malley and O'Gorman, 2001; Enterprise Strategy Group, 2004).

"You've got ninety percent of the technology companies based in Dublin" (Irish Software Association, 2004).

* Derived from calculations on National Software Directorate. (2004). *Software Industry Statistics for 1991 - 2003*, Available online at: <http://www.nsd.ie/htm/ssii/stat.htm>. & Enterprise Strategy Group (2004). *Ahead of the Curve: Ireland's Place in the Global Economy*, Forfás, Dublin.

⁹ Enterprise Strategy Group (2004) define the Irish ICT sector as comprising Application Software, Hardware and Systems, Support Services, Digital Content, ebusiness, Microelectronics Design and Enterprise Application Integration Software

However, in recent years a strong software base has emerged in the Galway region as spin-off companies from Digital, a hardware manufacturer who was based in Galway for three decades (National Software Directorate, 1999). Nonetheless, there remains an imbalance as to the location of indigenous software firms, a factor which Enterprise Ireland is seeking to address, via the establishment of regional incubation centres (National Software Directorate, 1999; Gallen, 2001). The lack of geographic spread also stems from cluster niche effects in the Dublin, Belfast and Cork regions, due to technology transfer from campus incubation centres, spin off firms from founders' previous employment (Hot Origin 2003) and presence of leading overseas MNEs (Crone, 2002). Consequently, Dublin has emerged as the most dominant location of Irish indigenous firms, from which a local "software culture" has developed (Ó'Riain, 1997; Crone, 2002).

3.3 THE FUTURE OF THE IRISH INDIGENOUS SOFTWARE SECTOR

The development of a nation's software capacity is dependent upon a variety of factors such as government programs and efficiency, increased global competitiveness, highly educated staff and research and development activities (Carmel, 2003; Tessler et al., 2003). Ireland's competitive and cost advantage has been eroded due to increased costs and a failure to utilise excess capacity within the sector. In addition, concerns such as the inadequate provision of broadband services and an insufficient transportation infrastructure, remain important considerations for future growth (Enterprise Strategy Group, 2004b). However, concerns surround the failure of indigenous firms to achieve sufficient scale, lack of management capabilities, inadequate funding provisions, skill

deficiencies (Enterprise Strategy Group, 2004b) and emergent competition from China, India, Israel and Eastern Europe (National Competitiveness Council, 1999). These issues are gaining momentum due to the threat of competitor countries (Enterprise Strategy Group, 2004b), despite the fact that these concerns are well known and long cited by the development agencies.

"A lot of the issues...have been around for a long number of years and...why its become more critical now is because of the increased competition from other low-cost countries" (Forfás, 2004a).

3.3.1 Lack of Scale

Hot Origin (2004), maintain that over seventy percent of Irish indigenous software firms fail to exceed annual turnover of two million Euro. This is attributable to a niche market focus, resulting in low customer base and limited product ranges which hinders indigenous firms in becoming key global players (Enterprise Strategy Group, 2004b).

"The problem for them... is getting to the next stage, they get to two million very quickly with a few good reference customers in the US or in the UK or wherever and then...getting beyond that barrier is hard for a lot of companies" (Irish Software Association, 2004).

According to the Irish Software Association, management and funding issues further exacerbate the issue of scale. As such, this issue remains the largest concern facing Irish indigenous software firms.

"The biggest barrier is achieving scale...The five pillars to that...would be...the sales, marketing capabilities, general management capabilities...access to funding and finance...right through the various stages" (Irish Software Association, 2004).

Furthermore, Forfás, maintains that scaling is not only a significant issue for indigenous firms, but also contributes to the overall cost structure of the firm.

"The issue of scale...is probably one of the more significant (issue) for the indigenous base across the whole...sector...When you're of low scale, there's a cost involved of getting out there into the market place" (Forfás, 2004a).

Moreover, environmental factors such as limited domestic market size results in many indigenous firms embarking upon internationalisation strategies without sufficient opportunity to develop sufficient scale beforehand.

"Generally, one of the things that the companies find here is that they're being pushed into...internationalisation, prior to them either having...scale in one area, or having had sufficient time to test the product on the market place or having even a reference client" (Forfás, 2004a).

Thus, internationalisation processes are hampered by firms' lack of experience in dealing with overseas markets, which in turn has negative impact upon firm scale.

"I think the companies need...not just finance, they need a lot of help in terms of dealing with export markets and...if you can quickly get a company to achieve scale...the cluster in Ireland will be stronger as a result, because you will have more larger companies" (Irish Software Association, 2004).

3.3.2 Management Capabilities

The market downturn in the 1999 to 2002 period resulted in a transition of some firms to a service focus and despite an improvement in market situation, this strategy has resulted in confusion as to firms' principal business activities.

"One of the issues that companies are dealing with at the moment is that...they started off as being a product Firm A number of years ago and then things went bad and their business plans were probably put to one side and redesigned (and) they became services companies to keep themselves ticking over and now they are at a stage where...they're saying...are we a product company or are we a services company" (Irish Software Association, 2004).

Furthermore, firm management are believed to lack the sales and marketing skills or experience necessary to conduct business with a global entity (Price Waterhouse Coopers, 1999) and sufficiently develop firm scale in order to cope with lengthy and cost-intensive sales cycles. Nonetheless, the lack of management capabilities in the sector may be attributable to the fact that many founders of indigenous software firms come from a technical or engineering background and therefore lack the knowledge and practical experience necessary to achieve scale and engage in successful internationalisation activities.

"I think there's a few things that you can address...sales and marketing capabilities in Ireland, that's something that we're trying to address at the moment, so are Enterprise Ireland. That's a key thing because...many of the founders tend to be of the engineering, technical side and they don't have the experience of running a Firm And the sales and marketing" (Irish Software Association, 2004).

In addition, the development of an international and or domestic strategic partner network could alleviate some of these issues and impart competitive advantage to start-up firms in regard to these and other areas (Price Waterhouse Coopers, 1999; ICT Ireland, 2003b).

An ISA survey conducted in 2002 highlighted that Irish software firms are grappling with a range of sales and marketing issues which are serving to constrain firm growth. These issues include the establishment of formal sales processes, the recruitment of quality sales personnel and an understanding of the importance of product management and market research as a principle firm activity (International Ventures Research, 2002). These issues are in turn serving to inhibit the internationalisation process of indigenous firms.

"Because of the...lack of scale, the companies are hindered...and you've the acknowledgement that there's relatively low capability in international sales and marketing, in sales management and actually probably in financial planning (and) longer term strategic (planning)" (Forfás, 2004a).

Furthermore indigenous software firms underestimate the importance of practical aspects in establishing an indigenous software firm, in terms of strategy, sales and marketing and overseas market knowledge (International Ventures Research, 2002).

"The...CEO...needs to be very aware of what the sales process is, and not just looking at their wonderful technology and think that this will take over the world, so from an internationalisation point of view, sales and marketing is absolutely key...Knowledge of the market is absolutely huge there's no point in thinking that you can take on America and not knowing the market itself...up to date market stats are vital" (Irish Software Association, 2004).

Additionally, the innovative and entrepreneurial nature of the sector often results in the development of technology for, as yet, undiscovered markets. Therefore, many firms are forced to "wait for the market", a factor which may be avoided by accumulating sufficient market knowledge.

"If it's the right type of entrepreneurial spirit directed towards increasing sales and revenue...they'll look to see what markets...their product can sell in...if the business plan has been done correctly they'll know exactly where the market is because...they hopefully won't

have produced a product that doesn't have a market...We've got far too many of those companies in fact, where the technology is great but there's no market ready for it yet...I would say that's where perhaps some of the companies fall down...the founders tend to be in Ireland and...tend to be the engineers and somebody with a bit of sales acumen" (Irish Software Association, 2004).

3.3.3 Funding Issues within the Sector

Funding mechanisms for Irish start up companies are one of the most difficult challenges for new companies to overcome (O'Malley and O'Gorman, 2001; ICT Ireland, 2003b). Many Irish SMEs start-ups receive finance from personal rather than corporate banking (National Competitiveness Council, 1999). Furthermore, availability of capital networks comprising business angels or venture capitalists is extremely limited, prompting a reliance on government initiatives such as the Business Expansion Scheme and Seed Capital Scheme (ICT Ireland, 2003b). The National Competitiveness Council (1999) state the need for the provision of comprehensive banking services to SMEs in order to further develop Irish internationalisation potential and aid SME's who are forced to seek overseas finance in order to fund internationalisation activities. However, the principal reason for lack of finance within the software industry could be attributed to characteristics inherent within small technology based firms, such as; growth potential linked to scientific knowledge and intellectual property, a lack of tangible assets, absence of track-record or reputation and the possibility of obsolescence in untested markets (Bank of England, 2001). Since indigenous software firms display these traits through a focus on niche markets, they may be categorised high-risk ventures by financial institutions. Additionally, many indigenous software firms do not fit within the principles prescribed to by the development agencies in terms of creating sustainable growth.

"When you scratch the surface a little bit deeper you find that for some particular...sectors that (funding availability) might be less, because they're regarded as higher risk...(and) higher risk doesn't really fit with the development agencies model of sustainable development and continuing employment" (Forfás, 2004a).

However, some commentators believe Irish firms are failing to exploit available funding opportunities (Price Waterhouse Coopers, 1999), particularly where firms present well thought-out business plans and market growth strategies.

"Funding...particularly for...early start-up phase can be challenging for companies...some might say, the funds are there...if they can prove that they have a good business plan and a well thought out process and market strategy and can avoid the me too and know the market and know the customer and know what they're about, then the funds are there" (Forfäs, 2004a).

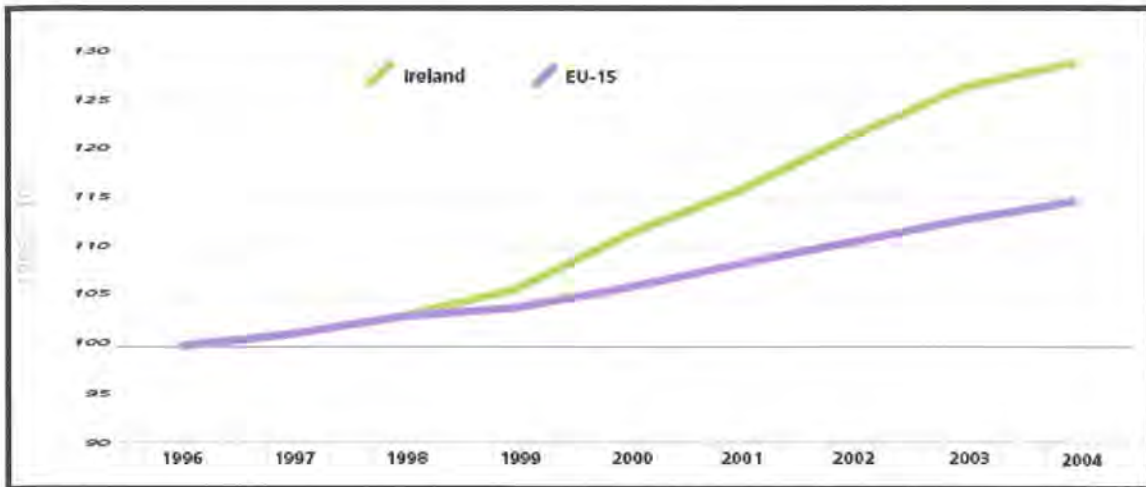
3.3.4 Ireland's Competitive Standing

The indigenous software sector is in a current state of transition, following the recent market downturn. As a result, there is much fear surrounding the future of the sector in terms of competitiveness and foreign competition.

"Ireland...is...in a phase of transition at the moment...We're...very strongly, production based and oriented...having achieved that largely on the back of the 10% tax regime, which was an extremely attractive to multinationals. Because we're no longer a low cost economy, because...there is an increased pace of globalisation and we see emerging markets like the India, China and even the accession countries coming in...it's time to step back and say...what's next and where do we go from here" (Forfäs, 2004a).

Relative to Ireland's trading partners, the average cost of Irish goods and services has increased by 25% (National Competitiveness Council, 2004a). Additionally, according to data presented by the Enterprise Strategy Group (2004), the cost of operating a business in Ireland has dramatically risen in comparison to those of our competitors. At present, Ireland is the third most expensive of nine countries for industrial electricity, landfill costs and fourth expensive of sixteen countries in relation to insurance premia (Enterprise Strategy Group, 2004). As Figure 3.3.4 indicates, these factors contribute to the widening cost gap between Ireland and our trading partners.

Figure 3.3.4 Irish Harmonised Consumer Price Index Relative to EU-15, 1996 – 2004



Source: Enterprise Strategy Group (2004). *Ahead of the Curve: Ireland's Place in the Global Economy*, Forfás, Dublin: 16 (Op Cit)
European Commission, Annual Macro Economic Database, (AMECO), 2004.

As such, there is a requirement for the development of a range of measures serving to enhance Ireland's competitive position. Strategies which promote increased cohesion between the software industry, academia (Irish Software Association, 2004b) and the development agencies could lessen some of these concerns.

"There's a few things that Ireland Inc. could do...the BES and Seed Capital has been extended, that will certainly help...R&D tax credit...more...strategic collaboration between the universities and industry and that could...certainly be driven by both parties...as well as a bit of help from government agencies. I think you do need to have everybody singing off the same hymn sheet...there's a sense at the moment that...we're a step away from crisis and if we make the wrong decisions now in terms of what we do with the indigenous sector, we could end losing the competitive advantages that we currently have" (Irish Software Association, 2004).

3.3.5 Threat of Emerging Software Competitors

Similar to Ireland, India has emerged as a strong base for software activity in the 1990s (Arora et al., 2001). Unlike Ireland, India's software base emerged via contracts obtained from European and US MNEs. Israel, on the other hand has some similarity to the Ireland as a software nation (Gallen, 2001) but differs due to high levels of government funding and early technology adoption in the form of military contracts. However, it is not only the threat of India and Israel that is creating apprehension

amongst indigenous firms, but also the emergence of China and European Union accession countries.

"India was the only contender really and there are others now, China is going to be a big player and they are going to be even cheaper at least for a period...Israel would be a different game...they would be a bit more into products...and...hardware quite a bit and a lot of that hardware would be on the back of American partnership all on the basis of military...similar to America" (National Software Directorate, 2004).

Further to this, Eastern European countries pose a future threat to the indigenous software industry due to high quality procedures and highly educated human resources.

"The threats and opportunities...I would see the accession countries in the EU as being both, one is new markets, two is new competitors...their education systems...(and)...extremely high quality" (Forfás, 2004a).

Consequently, the importance of maintaining Ireland's high education standard should not be understated.

"The Indians are terrified of China, so that just goes to show how competitive China is, and the only thing where...we're competitive is...we're a well educated workforce, and we need to ensure that, that remains the case" (Irish Software Association, 2004).

The Israeli software industry in particular may serve as a large competitive force. This is due to strong links between Israel and the US, which is Ireland's largest software market.

"They were both almost kind of created out of nothing...but...the Israeli work...the US market very cleverly and...a lot of people who provide funding and finance in the US...are often of...Jewish descent, so...there's a lot of very strong ties there, we use our own ties there as well" (Irish Software Association, 2004).

Furthermore, the onset of increased software competition will also ultimately affect internationalisation activities of indigenous software firms. Historically, indigenous firms have looked to the US and the UK as principle overseas markets. However, there is now an acknowledgement that in order to retain competitive advantage, indigenous firms should seek further overseas markets. This infers that indigenous firms should place a greater emphasis on awareness of overseas cultural issues and the need to conduct comprehensive market research activities in preparation for internationalisation.

"We need to start looking outwards more than we have been doing...because we've looked out to the...UK, which is...a relatively easy first step, which certainly isn't as complex as some of the cultures in the other European markets...where you have the culture, the language, the process, the mindset, all of those other cultural issues that is hugely important to understand if you are trying to break into new markets" (Forfás, 2004a).

Nonetheless, Ireland's innovative, entrepreneurial spirit and ability to spot new market niches should preserve Ireland's software standing, in comparison to the inflexible approach advocated by the Chinese and Indians, suggesting that the future of indigenous software appears to lie in research and development activities.

"We're English speaking, our engineers are clever...In India one of the biggest issues at the moment is if you give...an engineer in India and...China a piece of software or code and tell them to develop that, they'll do exactly what you tell them...If you give that to a guy in Ireland...he'll develop it according to what he thinks...With the Indian and Chinese, they'll do it very...well...but they'll do it exactly as they're told, with no...imagination...they won't use their intuition...so we have that advantage. But...from a basic...low-level development, we're not operators and there's no point in trying to compete" (Irish Software Association, 2004).

However, as early as 2000, the development agencies began to encourage indigenous firms to view the Indian software market as an opportunity for growth through outsourcing activities (The Irish Times, 2000b, 2000a). An extension of this initiative could prove a vital success factor in determining the continuing success of the Irish indigenous software base. Such a strategy could serve to facilitate increased R&D, while also enhancing Ireland's innovatory capacity.

"There's quite a lot of...opportunity around business models...one of those could be...ways of developing the product...maybe using some low-cost countries themselves and managing their intellect and their management capabilities and core design and research in the home front...(and)...lowering your cost base of your final product in that way...so embracing...what's going on in terms of globalisation and global business models rather seeing these as threats" (Forfás, 2004a).

3.3.6 Consolidation Activities

In 2003, only 55% of indigenous software product firms reached profitability. As a result, many industry commentators believe consolidation activity is necessary to address this scale deficiency (Hot Origin, 2004).

"What I'd like to see is a smaller number of larger companies...that would be I think a key success indicator...the Irish software sector is better at niches than it is at mass production and...we just don't have that competitive edge to do that anymore, so a niche strategy is probably what you are looking at" (Irish Software Association, 2004).

The ISA maintain that this approach could assist a greater number of indigenous firms in seeking initial public offerings (IPOs).

"I think that...the market (would) feel more confident if there was a little bit more activity in the IPO" (Irish Software Association, 2004).

However, this strategy must be challenged concerning the insufficient size and funding of indigenous firms in both attracting overseas investment and in acquiring other indigenous firms. Furthermore, the majority of indigenous firms operate within niche markets, therefore finding strategic fit with another indigenous firm may be highly unlikely.

3.3.7 Increased Governmental and Development Agency Roles

The government has played an integral role in the development of Ireland's indigenous software base. Through fostering of close links between third level institutions and industry, the government encourage an environment of learning and innovation within the sector (Price Waterhouse Coopers, 1999). Other initiatives have included the establishment of business incubation centres throughout Ireland, in order to provide start-up advice and promote networking and collusion opportunities between firms (Gallen, 2001). Regardless of these efforts however, Ireland's software standing in comparison to other countries following the same strategies is comparatively low (Price Waterhouse Coopers, 1999). This is attributable to the fact that many indigenous firms do not engage in serious levels of research and development (R&D) (Price Waterhouse Coopers, 1999; Green, 2000). Instead, much R&D activity is outsourced to non-indigenous third party firms. Commentators believe the reason for this is due to a lack of R&D funding support from the government (Price Waterhouse Coopers, 1999). As such, repeated calls have been made for the commercialisation of research in conjunction with third level institutions to facilitate the transfer of technology to a

commercial environment (Forfás, 2004b; InterTrade Ireland, 2004; Irish Software Association, 2004b) therefore, facilitating indigenous firms to achieve greater scale.

"The very basis of our sector is commercialising is research and if research is not done...in our universities which has a commercial aspect to it, well then... that...scale will never be achieved (Irish Software Association, 2004).

Additionally, Enterprise Ireland has launched a framework called Internationally Traded Services 2007 (ITS 2007); a framework designed for the promotion of Ireland as a digital based information society focussing on digital media, e-business and mobile and wireless interfaces (Enterprise Ireland, 2002). ITS 2007 recommends strengthening research in the informatics sector; software, technology and product development and new emerging areas as digital media and telecommunications (Enterprise Ireland, 2002). Furthermore, the government are seeking to promote Ireland as a future e-commerce hub, with the establishment of the Digital Hub, a cluster modelled on Silicon Valley and located within a nine-acre location within Dublin's inner city. Due to be completed by 2010, it is hoped the Digital Hub will reap tremendous rewards in terms of new business development and R&D activities (ICT Ireland, 2003b). Further to scaling issues, the ISA believe that if the government were to assume a role as an early adopter of technology, greater potential would exist for firms to achieve credible scale and experience before embarking on an internationalisation strategy (ICT Ireland, 2003b).

"When we looked at what was happening in other countries, we found that most of the...governments were purchasing a lot of SME...technology...whereas in Ireland, it's gone back to the old adage, that...nobody ever got fired from em buying from IBM, so they are buying from the larger companies even though it mightn't make sense from a financial point of view" (Irish Software Association, 2004).

This strategy could be also extended to include local and multinational firms. However, the onus is on indigenous firms to act as effective and competitive market suppliers.

"The government is one on one side and then there are maybe some of our major companies...national and multinational...who also can play a role in sourcing from local providers and suppliers...but obviously local providers and suppliers have to pitch their game...so they have to be up there as well to compete effectively" (Forfás, 2004a).

Furthermore, the National Competitiveness Council (2004b), maintain that the government has an increased role to play in supporting Ireland's innovatory and competitive position. This role should involve the development and promotion of commercial centres of excellence (ICT Ireland, 2001a; Irish Software Association, 2004; National Competitiveness Council, 2004b) and increased responsiveness in terms of infrastructure and other mechanisms to facilitate the development of clusters and the provision of appropriate legislation to deliver necessary support mechanisms for networking activities across Ireland (National Competitiveness Council, 2004b).

"One of the things that we're looking at the moment is pushing an idea of a commercial centre of excellence which would (mean) we would looking at a niche strategy for the software sector...In the Dublin areas, primarily finance and telecoms, in the Cork area it's pharmachem...Galway might be something else...Ireland is small enough (because) unless you are based out in Tory Island, you are gonna have access to a network... it's quite possible that you will have a niche strategy which will involve a kind of a niche cluster" (Irish Software Association, 2004).

Forfás (2004), states that the identification of "early wins" and early successes within the indigenous software industry would serve as encouragement to other firms to follow a similar progression path.

"The idea of collaborating and networking is very strong if it can be made to happen, I do think it is important to identify some early wins...if you can get early success in (an) almost a self fulfilling prophecy, yes it works we want one as well, and we know we have to put in our effort to it. It requires being industry led...which is very important, because if it's not industry led, it can lose its relevance very quickly" (Forfás, 2004a).

The National Competitiveness Council (2004) concurs with the notion that the development of collusion activities in the technology sector should be industry led. Further to this, the Council comments that enterprise policy should not be concerned in identifying winners, but focussed on further development and reinforcement of existing strengths within the technology sector (National Competitiveness Council, 2004b).

"Enterprise Ireland probably has a role to play in its overseas network of...looking at a more sectoral focus and developing their own competency and capability in market and mechanisms for disseminating that back to the relevant companies that they see fit so quite a lot of linkages could happen...on that area" (Forfás, 2004a).

As a final point, there is a requirement for government consideration of increased provision of third-level courses specialising on marrying technology and marketing disciplines. This strategy could be useful in addressing the relative lack of sales and marketing capabilities in the sector.

"There's a view there that there's probably sufficient and adequate supply of sales and marketing graduates...(but)...the companies won't hire them because of their lack of experience from a company perspective, particularly with technology companies; they want somebody who has a technology capability and a sales capability" (Forfás, 2004a).

3.3.8 The Development of Strategic Partnerships and Networks

Many indigenous firms have cited positive growth indicators for the 2004 period (National Software Directorate, 2004). However, these indicators also point toward a need for indigenous firms to further engage in strategic partnering and networking activities with companies offering a broad range of hardware, software and software services in order to capitalise on future growth within the global software market (Hot Origin, 2004).

"We probably need to do a bit more work on strategic partnering...it has to be managed very carefully and there's a different set of skills require to managing a strategic partnership as there would be to managing...a customer relationship...I...think that it has to be managed quite carefully...but you do...have to be aware of that you may alienate potential customers as a result" (Irish Software Association, 2004).

The basis of successful strategic partnerships is based upon the underpinning interpersonal relationships. As such, informal and formal networking activities are an important consideration for indigenous firms. Networking is influenced by factors such as; continual learning, innovation and growth and are conducted by a variety of network players such as development agencies, trade associations and firms themselves (Ó'Riain, 1997). It is therefore important that indigenous firms appreciate and understand the benefits of networking in order for the strategy to be a success.

"Companies need to be at a stage of...management maturity...where...they realise and understand the benefits that can be gleamed from a network in terms of...the transfer of tacit knowledge, in terms of...the identification of international projects, that they can find somebody that has complementary skills, that you have the opportunity to align or partner...to address a

particular project...but...there needs to be a sense of maturity and trust in all of that because...generally with the smaller companies there's an element of protectiveness around them" (Forfás, 2004a).

Moreover, the promotion of a culture of networking and collaboration activities could serve as a mechanism for the future promotion and success of the indigenous software industry.

"When, you get this culture of networking...knowledge transfer a couple of other digital hub-type innovation environments...that then becomes very much the culture and the obvious way of doing business...and...there are only benefits to be gained from that...but it does mean getting a couple of early quick winds, success and reinforcing the model" (Forfás, 2004a).

This strategy should be ultimately industry led, with clear purpose and goals, coupled with integrated mechanisms for achieving those objectives. Strong government and development agency assistance is also required to realise this strategy and perhaps developed pilot networking schemes around Ireland (Forfás, 2004a). Networking activities between software firms could herald such benefits as credibility of association, market intelligence and access to shared resource activity in terms of strategic partnering (Torres and Murray, 2003). As such, the National Competitiveness Council (2004b), recommend a number of strategies to encourage networking activities across industry. These strategies, such as collaboration across various development agencies could identify and encourage networking and clustering approaches and the targeting of FDI opportunities to increase competitiveness, coupled with the encouragement of networks within those opportunities (Irish Software Association, 2004; National Competitiveness Council, 2004b).

"One of the biggest issues that we have from a competitive point of view is that we're competing directly now with cheaper economies and our wages, while they've improved a little bit...they're still very high...From a wage point of view (we are) very uncompetitive with these countries, so we need to collaborate to an extent where...we move up the value chain, because we are simply not in the position to compete at the lower level with...India and China (Irish Software Association, 2004).

Moreover, potential exists for indigenous firms to engage in networking activities with locally based overseas firms, as currently, these collusion and networking opportunities are largely neglected by indigenous firms.

"I don't think enough strategic partnerships, relationships...networking has been done between the indigenous and the multinationals" (Irish Software Association, 2004).

3.4 CONCLUSION

Ireland has emerged as a strong software base for both indigenous and MNEs due to a high growth economy and proactive inward FDI strategies by the Industrial Development Authority (IDA). However, in recent years the indigenous software industry has fallen victim to the global downturn in the ICT sector and global competition in software continues to become increasingly broad and competitive (Carmel, 2003). Consequently, Ireland must develop mechanisms in order to enhance the competitiveness of the indigenous software sector concerning the threat of emergent software nations, lack of scale within the sector and greater industry led initiatives and collaboration activities in conjunction with government and development agencies, through strategic planning, outsourcing, strategic partnerships and targeted research and development activities. In spite of these issues, the Economic and Social Research Institute (ESRI) predict that the 2005 to 2010 period will signal a return to growth in the high-technology sector. 2004 has signalled large numbers of newly formed firms, increased spending within telecommunications and financial services clusters and increased levels of venture capital availability are expected (Hot Origin, 2004), therefore there remains an upbeat optimism within the indigenous software industry of continued success (Irish Software Association, 2004b) in spite of the turbulent conditions that have permeated the industry in recent years. This chapter has highlighted the context of the Irish indigenous software sector, including the composition of the sector as a whole, the emergence of the sector and issues that concern the future of the sector. The following chapter will describe and explain the methodology employed in the research.

Chapter Four ~ Research Methodology

4.0 INTRODUCTION

This chapter will outline and justify the choice of methodology in the thesis, through the context of the research framework assumed by the researcher, in conjunction with the methodological issues in conducting the research. The unit of analysis and the data sources are outlined and the instruments used to collect the data are presented. In conclusion, procedures undertaken by the researcher in undertaking data analysis and generating findings are discussed.

4.1 THE RESEARCH QUESTION

The research question posed by the researcher is:

- ❖ To examine the internationalisation process of Irish indigenous software firms.

Furthermore, this question incorporates two research objectives:

- ❖ To discover the influence of strategic partnerships in facilitating this process and
- ❖ To determine the barriers and challenges to the internationalisation process of Irish indigenous software firms.

There is much available research as to the process by which firms internationalise, however, the applicability of this research to small to medium sized Irish companies is limited as previous service sector studies are rooted within a US service multinational perspective (O'Farrell et al., 1998). Moreover, existent internationalisation theory lacks explanatory power regarding internationalisation processes of knowledge intensive entities (Axinn and Matthyssens, 2001a; Bell et al., 2004) and firms who choose to seek international markets from inception (McDougall et al., 1994) as is the case within the

indigenous Irish software sector. Due to the plethora of research available as to the internationalisation of large, well-established multinational enterprises in comparison to the deficiency of information available regarding the process of Irish indigenous small firm internationalisation and surrounding contextual issues, the researcher chose to concentrate on indigenous Irish software industry for analysis. In addition, the sector provides an excellent opportunity to examine small firm internationalisation behaviour in a dynamic context (Bell, 1995), with recognition of the barriers and unique challenges faced by Irish indigenous software firms. As noted in chapter one, small firms face unique challenges throughout internationalisation (Manlova et al., 2002), yet the majority of research pertaining to barriers and challenges to the internationalisation process is of US origin with little consideration of these effects on software firms and other knowledge intensive service firms (Bell, 1997). In addition, the influence of strategic partnering on the internationalisation process of Irish indigenous software firms is largely neglected, despite a recognition that these activities are a vital and unique attribute of the Irish indigenous software industry (Crone, 2003).

Software is a multidimensional and diverse industry due to new international market opportunity and the propensity of software firms to operate in globalised niches (Nummela et al., 2004). The indigenous Irish software industry is characterised by large numbers of firms engaging in an internationalisation strategy due to overseas market opportunity and limited domestic market size. In 2002, ICT exports represented 34% of total Irish exports (Hot Origin, 2004). As such, the indigenous software industry heralds such unique characteristics as high levels of productivity, innovation, increasing export-led behaviour from inception and use of international strategic alliances in a less favoured region (Crone, 2003).

The choice of Irish indigenous software firms for research afforded ample opportunity for the researcher to conduct interviews with small firm decision-makers and/or founders, as small firm internationalisation is dependent on decision-maker influences (Aaby and Slater, 1988; Coviello and Munro, 1995; Gilmore and Coviello, 1999; Axinn and Matthyssens, 2001a). Moreover, the selection of indigenous software firms enhanced the probability of gaining sufficient access into respondent firms and ensuring that the researcher enlisted the appropriate person for interview. Single sector analysis as opposed to multiple sector investigation recognises that internationalisation processes are rooted in sectoral contexts (Melin, 1992; Coviello and Martin, 1999). In addition, the use of software as single industry analysis is preferred as cross-sectional data restricts the extent of our understanding of the internationalisation process (Coviello and McAuley, 1999). Furthermore, previous studies indicate that cross sectional studies fail to recognise the dynamics of the internationalisation process (Fletcher, 2001) and mask “real differences” in internationalisation behaviour, whereas the choice of a single sector facilitates richer theory generation (Jones, 2001).

4.2 RESEARCH DESIGN

Research methodologies pertain to a system or set of policies, (Frankfort-Nachmias and Nachmias, 1996; Crotty, 1998) upon which research is centered in order to evaluate claims for knowledge and to set out a clear vision and strategy for research and how it is to be undertaken (Frankfort-Nachmias and Nachmias, 1996; Potter, 1996; Crotty, 1998). There are varying ways a researcher may outline a research methodology. As a result, existent literature provides much debate as to the best methodological approach (Potter, 1996; Crotty, 1998; Saunders et al., 2000; Quinn-Patton, 2002; Collis and Hussey,

2003). In addition, there are also many approaches to formulating a research framework. In designing a methodological structure in the context of the above issues, a framework which encompasses an analysis of the principle research paradigms; positivism and interpretivism, quantitative and qualitative research approaches and the research design process; consisting of the elements of inquiry, methods and analysis was chosen. The benefits of using such a framework is to allow a flexible research design to emerge (Shaw, 1999). The framework is used to guide the data collection process, while still accounting for flexibility to investigate interesting issues that emerge during the research process (Shaw, 1999).

4.2.1 Research Paradigms

Research paradigms are a method of considering and understanding the complexity of the real world (Quinn-Patton, 2002). In other words, paradigms outline, “what is important, legitimate and reasonable” (Quinn-Patton 2002:69). Paradigms are considered in the same vein as alternative knowledge claims and research frameworks (Crotty, 1998; Creswell, 2003), are concerned with the declarations that the researcher makes regarding; what constitutes knowledge (**ontology**), how knowledge is known (**epistemology**), the values inherent within this knowledge (**axiology**), how it is written (**rhetoric**) and the process used by the researcher in order to study it (**methodology**) (Hudson and Ozanne, 1988; Potter, 1996; Crotty, 1998; Quinn-Patton, 2002; Collis and Hussey, 2003; Creswell, 2003).

4.2.2 Interpretivism and Positivism

There are two principle research paradigms, interpretativism and positivism, often termed differently in research literature (Collis and Hussey, 2003). Interpretivism is

often termed as qualitative, subjectivist, humanistic or phenomenological research (Collis and Hussey, 2003). Positivism and terms such as quantitative, objectivist, scientific, experimentalist and traditionalist are often used interchangeably (Collis and Hussey, 2003). The interpretative paradigm was chosen due to the issues of ontology, axiology, epistemology, rhetoric and methodology set out in Table 4.2.2, which summarises positivistic and interpretative approaches to alternative knowledge claims.

Table 4.2.2 An Integrated Summary of Positivist and Interpretive Approaches

	Assumptions	Positivist	Interpretive
Ontological	Nature of reality	Objective, tangible Single Fragmentable Divisible	Socially constructed Multiple Holistic Contextual and Subjective
	Nature of social beings	Deterministic Reactive	Voluntaristic Proactive
Axiological	Overriding goal	"Explanation" via subsumption under general laws, prediction	"Understanding" based on Verstehen
Epistemological	Knowledge generated	Nomothetic Time-free Context-independent	Idiographic Time-bound Context-dependent
	View of causality	Real causes exist	Multiple, simultaneous shaping
	Research relationship	Dualism, separation Privileged point of observation	Interactive, co-operative No privileged point of observation
Rhetorical	The research language	Formal Based on set definitions Impersonal voice Use of accepted quantitative words	Informal Value laden Biased Use of accepted qualitative words
Methodological	The research process	Deductive Cause and effect Context free generalisations Leads to prediction, explanation and understanding Accurate and reliable through validity and reliability	Inductive process Emerging design Context bound Theories developed for understanding Accurate and reliable through verification

Source: Adapted from Hudson, L. A. and Ozanne, J. L. (1988), "Alternative Ways of Seeking Knowledge in Consumer Research", *Journal of Consumer Research*, Vol. 14 No. March p: 509 & Collis, J. and Hussey, R. (2003), *Business Research: A Practical Guide for Undergraduate and Postgraduate Students*, 2nd Edition, Palgrave Macmillan, Hampshire p: 49.

4.2.3 Ontology and Epistemology

Ontological and epistemological issues may be considered together (Crotty, 1998) as both seek to discover what the nature of reality is and the relationship between the researcher and the subject matter under research (Collis and Hussey, 2003). Positivist

research is concerned with objective and singular realities, whereas interpretivism believes reality is subjective, multiple (Collis and Hussey, 2003) and socially constructed (Hudson and Ozanne, 1988). Positivist researchers consider research independent and knowledge is regarded as an observable and measurable concept (Collis and Hussey, 2003). On the other hand, interpretivism takes a historical viewpoint (Hudson and Ozanne, 1988), where the facets and process of a phenomenon are of first importance. The researcher uses “thick descriptions” to illustrate a phenomena or a process (Hudson and Ozanne, 1988; Hill et al., 1999), as people (managers) act in response to their environment (Hudson and Ozanne, 1988).

4.2.4 Axiology

Positivist’s axiological assumptions believe is research free of values (Hudson and Ozanne, 1988). Therefore, research conducted under the positivistic paradigm is objective and the researcher is detached from the phenomena (Collis and Hussey, 2003). Positivists believe research will not affect subjects under study and these subjects remain constant after the study has been conducted (Collis and Hussey, 2003). This belief stems from natural sciences research. However, this argument is less persuasive for research based on peoples’ behaviour and actions (Collis and Hussey, 2003). The axiological or overall goal of interpretivism is description and understanding and not prediction of behaviour (Hudson and Ozanne, 1988; Hill et al., 1999). The researcher engages in *an* understanding of research, not *the* understanding of the research, as it is the essentials of the research that is most important (Hudson and Ozanne, 1988).

4.3 THE RESEARCH APPROACH

The choice of research approach is closely correlated with the choice of research paradigm and alternative knowledge claims. According to Creswell (2003), the research approach consists of the adoption of quantitative, qualitative or mixed methods approaches. A quantitative approach is dominated by the use of the positivistic or post-positivistic paradigm, wherein the use of theory testing, surveys and experiments are advocated (Creswell, 2003). Quantitative studies are used to confirm hypotheses and involve the use of specific and precise data and are generally characterised by high reliability but low validity (Collis and Hussey, 2003). A researcher taking a quantitative approach usually follows a rigid research design (Hudson and Ozanne, 1988) in a similar vein to a controlled experiment. This design allows the researcher to ensure that the research is centered on the “true reality” of the research (Hudson and Ozanne, 1988).

4.3.1 A Qualitative Approach

Qualitative research approaches usually use smaller samples than quantitative data. Theory generation is facilitated by rich and subjective data usually composed of highly valid data of low reliability (Collis and Hussey, 2003). Qualitative researchers bring preconceived knowledge to the research process, yet the researcher is open to new emergent information during the research process (Hudson and Ozanne, 1988). Qualitative research may also borrow some elements from quantitative methods. In this way, the researcher seeks theoretical implications through cross-case analysis of observations and interviews (Potter, 1996). In conducting qualitative research, the researcher usually travels to the location of the respondent, as the respondent is observed in their own natural setting and the researcher is drawn in to the respondents’

experiences (Creswell, 2003). Qualitative research may follow an emergent or flexible design and the interview questions may alter after testing and become more focused as the researcher learns what questions to ask and how to ask them (Creswell, 2003). Interpretivism and qualitative research are intrinsically linked because the researcher interprets issues that emerge from qualitative research. This interpretation may include descriptions of the research site, analysis of themes and identification of categories (Creswell, 2003). Qualitative research takes a holistic viewpoint. The researcher offers a “panoramic” rather than “micro-analyses” view (Creswell, 2003) and more than one strategy of inquiry to achieve this view may be employed (Creswell, 2003).

The overriding research question addressed in this thesis is that to explore how internationalisation is undertaken by indigenous Irish software firms. Where research is process-based, the researcher seeks to discover how the process occurs, as opposed to the process outcome (Quinn-Patton, 2002). Thus, this research is centered on yielding insights of how indigenous Irish software firms internationalise, as opposed to investigating the result of this internationalisation process. The use of inductive qualitative research advocates such an approach of using theory in terms of broad explanations (Creswell, 2003). Qualitative research is considered suitable for such process based studies (Quinn-Patton, 2002), as portraying a process such as internationalisation involves the depiction of how people interact (Quinn-Patton, 2002) through using thick descriptions of each person’s experience of the process (Quinn-Patton, 2002). Due to the variety of software firms engaging in internationalisation, it is improbable that each firm will encounter the same phenomena during the process. Qualitative research however, accounts for variety in the experiences of people engaged in processes (Quinn-Patton, 2002). Furthermore, the use of qualitative as opposed to

quantitative methods allows for an improved view of internationalisation, as business executives offer their viewpoints and opinions regarding the process (Yeung, 1995).

The internationalisation process is complex, unique and dynamic (Reid, 1981; Coviello and Munro, 1997) and should be considered as a function of individual sets of occurrences. Much of the extant literature available regarding internationalisation processes place a large emphasis on managerial learning and commitment (Coviello and Munro, 1997). The use of qualitative interviewing is a suitable technique to “get inside” this process to understand experiences (Anderson et al., 1998; Shaw, 1999) of indigenous software firms. The phenomena of international business and management is too complex a process to be understood and theorised through specifics (Saunders et al., 2000; Quinn-Patton, 2002). The process is indefinable through a set of numerical variables (Shaw, 1999) as practiced by quantitative researchers, rather, people and processes should be examined holistically (Hudson and Ozanne, 1988; Shaw, 1999; Quinn-Patton, 2002) in a qualitative and interpretative manner.

Existing theories and models of internationalisation are behaviourally (Bell, 1995; Fillis, 2001) and relational based (Coviello and Munro, 1997; Fillis, 2001). Therefore, it is reasonable to assume a qualitative approach to such research on behaviour and attitudes is acceptable (Tull and Hawkins, 1990)¹⁰. Historically, the principal method for data collection regarding internationalisation is quantitatively based (Leonidou and Katsikeas, 1996; Fillis, 2001) in the form of a mail questionnaire (Leonidou and Katsikeas, 1996). Qualitative in-depth interviews however, “.... provides a better alternative to mail survey in terms of collecting reliable data” regarding firm and data

¹⁰ (Op. Cit.) Torres, A. M. and Murray, J. A., (2003) “The role of networks in venture creation among Irish software firms”. *Irish Marketing Review*, Vol. 16, No. 1, pp. 5 - 14.

complexity (Cavusgil and Zou, 1994; Leonidou and Katsikeas, 1996). Moreover, the traditional positivist methods employed in researching internationalisation “has perhaps hindered much of the research in the area” (Coviello and McAuley 1999:36) therefore, a more creative approach for investigating internationalisation is required (Coviello and McAuley, 1999; Fillis, 2001). The traditional use of quantitative data to examine internationalisation processes has impeded new theory generation (Fillis, 2001). An increasing numbers of small firms are seeking an internationalisation strategy, therefore other forms of methodologies are essential in order to understand this phenomenon (Fillis, 2001) and to counteract beliefs that existing research offers “hollowed” views of the reality of internationalisation and international business research (Yeung, 1995). In addition, existing knowledge and understanding of small firms fails to offer significant theory contribution in terms of social networks and smaller firms (Shaw, 1999).

Authors have argued in favour of qualitative research, which recognises small firm characteristics (Churchill and Lewis, 1986, cited by Torres and Murray, 2003; Fillis, 2001; Shaw, 1999). Small firms such as indigenous software firms, should be examined in the context that they are distinct elements as opposed to larger firms (O'Donnell and Cummins, 1999; Shaw, 1999), as such, the adoption of a qualitative research approach provides an alternate explanation for the internationalisation process of Irish indigenous software firms (O'Donnell and Cummins, 1999; Shaw, 1999). Internationalisation from the network perspective and international entrepreneurship concurs with the interpretative assumption, that people interact with their environment (Hudson and Ozanne, 1988) as managers act collaboratively (Cravens and Piercy, 1994; Hoang and Antoncic, 2003) and engage in interpersonal interaction and interfirm relationships (Shaw, 1999; Hoang and Antoncic, 2003). There is little information regarding the

“early organizational process” and network development (Hoang and Antoncic, 2003). Our knowledge of the contributions of individuals to the internationalisation process remains fragmented (Liesch et al., 2002), which is surprising given the role that individuals play regarding internationalisation networks (Liesch et al., 2002). These issues “bring to the fore the need for interpretive approaches to the study of internationalisation processes” (Liesch et al., 2002:27).

According to O'Donnell and Cummins (1999), it is necessary to look beyond traditional methodologies (such as quantitative methodologies) in order to understand comprehensively the networking activities of SME managers. In contrast to a quantitative methodology, qualitative methods “provide a better opportunity to access the interplay of network relations and business decision making *vis-à-vis* quantitative check-list approach commonly adopted in international business research” (Yeung, 1995:322).

A focus on strategic relationships as internationalisation facilitators and research on individual's contribution to these relationships may signal a renewed emphasis on behavioural factors as means of exploring the principal issues of internationalisation (Liesch et al., 2002). Existing research on internationalisation processes is fragmented (Reid, 1981; Fillis, 2001). However, research which takes the decision process decision makers and causal relationships into account in terms of qualitative research will prove significant (Reid, 1981). Existing positivistic research has resulted in networks and relationships being presented as structural dimensions, a qualitative approach however, would encompass interactional dimensions to the research (Shaw, 1999).

In this instance, the researcher has chosen to adopt an inductive qualitative research approach due to the alternative knowledge claims advocated by the researcher and in consideration of the nature of the research question and underlying objectives in terms of behavioural and relational aspects. The adoption of an inductive qualitative approach “provides a richness and depth of understanding to the internationalisation process which is not possible with survey data” (Coviello and Munro, 1997:383). Therefore, “in order for theory to progress in a meaningful way, an increased qualitative input could prove useful” (Fillis, 2001:768), as qualitative research provides superior prospects than quantitative research when access to “the interplay of network relations” and decision making processes are required (Yeung, 1995). As such, qualitative methods have begun to feature more prominently in small firm research (Shaw, 1999).

4.4 METHOD OF INQUIRY: SEMI STRUCTURED IN-DEPTH INTERVIEW

The future of researching international business rests with interdisciplinary methodological discussion and adoption as valuable lessons can be learned from approaches rooted in the social science techniques such as the in-depth interview (Yeung, 1995). Interviewing is a method by which data is collected from interviewees in a verbal manner (Potter, 1996) and is considered as being “the best” method of data collection (Easterby-Smith et al., 1991; Yeung, 1995; Hastings and Perry, 2000). The use of in-depth interviews provides a flexible and open way to investigate “complex, dynamic interactive situations” (Gilmore and Coviello, 1999) such as the internationalisation process. Exploratory studies are typically suitable for an interview approach (Saunders et al., 2000) as interviews allow the researcher to discover the

reasoning behind decisions made by the respondent and to appreciate the opinions and beliefs of the respondent (Yeung, 1995; Hill et al., 1999; Saunders et al., 2000). The examination of the opinions and motivations of the respondents further strengthen the argument in favour of interviews as a data collection measure (Hill et al., 1999).

In-depth interviews permit researchers to deal with a large range of issues in an open ended fashion and permit probing and examination until both researcher and respondent have reached a mutual understanding (Gilmore and Coviello, 1999). The advantage of using in-depth interviews with a semi structured approach is that issues raised may alter from one interview to another (Collis and Hussey, 2003). Furthermore, in-depth interviews are considered suitable for research involving complex phenomena, or where the question order and logic requires variety (Saunders et al., 2000) and permits researchers to ensure that they are speaking to the correct and most suitable person. As a rule, only “business elites” possess the in-depth and experimental knowledge required for examination of international business practices (Yeung, 1995). In the case of Irish indigenous software firms, these business elites generally occupy the position of both owner/manager.

Interviews may be preferred to questionnaires where managers are the unit of analysis of the study, as this provides the respondent with the opportunity to ponder events or decisions without the need to write down responses. As such, interviews may realise a higher response rate than the use of mail based questionnaires (Saunders et al., 2000). Qualitative interviewing is considered an extremely reliable method for acquiring information from international business executives (Yeung, 1995). Quantitative methods such as the use of a postal questionnaire may not provide the same level of

reliability due to the absence of human interaction throughout the process (Yeung, 1995). Furthermore, interviewing has the potential to equally contribute to theory as any other method (Yeung, 1995). Despite the plethora of research methods available, qualitative interviewing should be considered the direct and most useful method (Yeung, 1995). The usefulness of this method “lies in its validity” (i.e. dealing directly with decision makers and the richness of information collected) and reliability (i.e. replicable in practice) (Yeung, 1995:314). In addition, the benefits of inductive qualitative approaches outweigh limitations in respect of entrepreneurial networks (Hoang and Antoncic, 2003). Furthermore, the usefulness of a qualitative research approach provides “the analytic generalisation or theory building that is the foundation of statistical generalisation or theory testing” (Hastings and Perry, 2000:213).

4.5 SAMPLING

Upon the development of the interview guide, the researcher set about compiling a list of Irish indigenous software firms. In order to synthesise a list of suitable firms, the researcher conducted a company search within the following databases.

- ❖ *The Irish Software Association company database.*
- ❖ *The National Software Directorate (National Informatics Directorate).*
- ❖ *Factfinder Business and Finance company database incorporating the Irish Times Top Irish 5,000 companies.*
- ❖ *The Deloitte and Touche Fast Fifty classification 2003 and 2004.*
- ❖ *Irish Computer Top 10 exporters 2003.*

In addition, the researcher referred to several other databases, but discovered that these sources either excluded indigenous software firms or provided conflicting or out of date information or included non-indigenous software firms.

- ❖ *DHL Top 50 Irish SMEs.*
- ❖ *Export Link Top 250 Exporters in accordance with the Irish Export Association.*
- ❖ *IDS Irish Top 5,000, Cream of Irish industry, Commerce and Government.*
- ❖ *The Golden Pages.*

The National Software Directorate proved a good source of information for indigenous software firms engaged in international activities, as did the Business and Finance company database, which outlines demographic information regarding firm size and business orientation. Furthermore, the Deloitte and Touche Fast-Fifty, which presents a classification of the top fifty, indigenous, high growth companies was found to be an excellent source of company data. However, because there are almost over nine hundred Irish indigenous software firms in operation, the researcher applied sampling techniques in order to determine a suitable list of firms for investigation. Sampling involves the selection of a smaller section of a larger population and its use is a crucial step for later data analysis (Miles and Huberman, 1994; Hill et al., 1999). In researching international business, it is not always feasible to obtain a comprehensive listing of a potential sample, therefore, “statistical sampling coverage” should not be considered a vital facet of the research process (Yeung, 1995). A qualitative research approach usually signals the use of small samples, selected purposefully to facilitate the inclusion of information rich cases (Hill et al., 1999; Shaw, 1999; Quinn-Patton, 2002). The use of purposeful sampling allows the researcher to gain deeper understanding of the research phenomenon (Shaw, 1999; Quinn-Patton, 2002). In order to ensure that

firms participating in the research possessed a desired level of information richness, a set of predetermined criteria (Shaw, 1999) was used.

Firstly, the researcher opted to exclude firms that did not satisfy the National Software Directorate¹¹ definition of Irish indigenous software firms as those which;

- ❖ *Develop software products/systems for subsequent sale to end users.*
- ❖ *Develop systems software or software development tools for sale to vendors.*
- ❖ *Provide services directly related to the design and/or development of software systems.*
- ❖ *Localise either own organization products or third party products.*
- ❖ *Develop programmes or systems for subsequent integration into hardware.*
- ❖ *Provide technical training in the area of systems analysis, design and programming.*
- ❖ *Offer "hot-site"/disaster recovery facilities.*

The definition does not include

- ❖ *Personnel of Irish companies based in overseas offices.*
- ❖ *Data entry or data processing or bureau services for local or overseas organisations.*
- ❖ *Training services for standard packaged software.*
- ❖ *Software development by in-house IT departments.*
- ❖ *Sale of hardware or third party software packages.*

Berry (1998), propose the definition of a small high-tech firms as; having annual turnover not exceeding ST£50m, less than two hundred and fifty employees, not a firm subsidiary, established by an individual or collection of individuals and established with

¹¹ *Source:* O'Gorman, C., O'Malley, E. and Mooney, J. (1997). *Clusters in Ireland. The Irish indigenous software industry? An Application of Porter's cluster analysis*, National Economic and Social Council, Dublin.

the intent of exploiting technical innovation or invention. As it is imperative that methodologies pertaining to small firm internationalisation incorporate contextual SME characteristics into the research (Gilmore and Coviello, 1999), the researcher chose to adapt these classifications in the context of indigenous Irish software firms to include firms; with between ten and two hundred and fifty employees and established by an individual or group of individuals. Moreover, it is important to recognise that the majority of Irish indigenous software firms represent these characteristics. In researching strategic planning functions such as internationalisation, the importance of the entrepreneur should not be overlooked, as business development is impacted by personal goals and characteristics of the owner/manager of the firm (Berry, 1998). Management attitudes to internationalisation is an important facet of the process, as the opinions, and attitudes of management ultimately determine the degree of internationalisation that service firms engage in (Javalgi et al., 2003). Consequently, the unit of analysis adopted by the researcher was owner/managers of indigenous Irish software firms.

However, upon compiling a list of three hundred firms, the researcher opted to reduce this list through the addition of further criteria. Over seventy-five percent of indigenous software companies in Ireland are located in the Dublin area due to clustering effects, spin off firms from previous employment and the presence of overseas MNEs (Crone, 2002). As such, the largest and most profitable Irish indigenous software firms are located within the Dublin region (Hot Origin 2002, 2003, 2004) the researcher chose to concentrate on indigenous Irish software firms, located in Dublin, engaged in business-to-business internationalisation activities. However, after applying these criteria and reiterating the sampling determinants the researcher discovered that the sample was still

too large at sixty firms. Therefore, additional sampling criteria were applied in order to reduce the number of firms in the sample. Hot Origin (2004), state that over seventy percent of Irish software firms are failing to achieve revenues in excess of one million Euro and a mere fifty-five percent of indigenous software firms are profitable. In order to construct a viable sample of successfully internationalising indigenous software firms, the researcher chose to select firms with revenues in excess of two million Euro per annum and excluded firms based on firm age and number of employees. Therefore, the final sampling determinants consisted of the following;

- ❖ *Owner/managers of Irish indigenous software firms in accordance with the National Software Directorate's definition of software firms.*
- ❖ *Engaging in internationalisation activities.*
- ❖ *Located in the Dublin area.*
- ❖ *With more than ten employees.*
- ❖ *Less than two hundred and fifty employees.*
- ❖ *More than three years in operation.*
- ❖ *With turnover of more than two million Euro in the last two years.*

The researcher also excluded;

- ❖ *Indigenous firms who do not engage in internationalisation activities.*
- ❖ *Indigenous firms sold or merged with another firm.*
- ❖ *Firms engaged in reselling activities.*

Following development of the research sample, the researcher identified fifteen Irish indigenous software firms suitable for contact; Bantry Technologies, Connect Global Solutions, Firm E, Firm C¹², Firm I Software, Firm B, Firm A, Transware, Firm D, Firm F, Firm G, Firm H Technologies, Cape Clear, Macalla and Firm J.

¹² GeoSoft is a Pseudonym, as the firm did not wish to be named in this study.

4.6 THE RESEARCH FUNCTION

The researcher had conducted two pilot interviews in December 2003, to determine suitable questions and best interview approach. In addition, the researcher established contact with Enterprise Ireland, the Irish Software Association and Forfás to conduct expert interviews regarding perceptions of the Irish indigenous software sector. These interviews were conducted in April 2004. Both sets of interviews and pilots were transcribed and thematically analysed in order to revise the interview guide in preparation to conduct further interviews with sampled respondents. Subsequently, each sample firm was contacted simultaneously by email and fax message¹³ with follow-up phone calls conducted within seven days of initial contact. Due to the high technology nature of the software industry, the researcher felt it was appropriate to principally email potential respondent companies, as several target respondents spend prolonged periods abroad or outside the office, yet are primarily contactable via email. In addition, the use of email as a communication method enabled the researcher gain direct contact to target respondents and schedule some interviews within shorter periods. The researcher primarily established contact with the sampled firms in May 2004; five respondent firms (Bantry Technologies, Connect Global Solutions, Transware, Cape Clear and Macalla) either refused the appeal for interview or failed on to respond to the request subsequent to receipt of email and fax and five phone calls to each firm. However, the remaining ten sampled firms agreed to participate in the research (66.6% response rate) and the interviews were conducted in the May-June period 2004, within business hours in the respondent company's location. The interviews were recorded digitally and generally lasted in excess of sixty minutes. Subsequent to conducting each interview, the researcher completed a research diary in

¹³ See Appendix C

order to record any unforeseen issues or topics for consideration and inclusion in succeeding interviews.

The researcher was aware that data collection regarding the internationalisation process of respondent firms might result in biased and inaccurate retrospective accounts of respondent firms' internationalisation process. In order to minimise and control this risk, researcher closely followed guidelines outlined by Huber and Power (1985) who propose several guiding methods to minimise imprecise data through the collection of retrospective accounts.

- ❖ *Identification of most knowledgeable person.*
- ❖ *Recognition of emotional involvement with the phenomenon.*
- ❖ *Attempt to motivate the informant.*
- ❖ *Consider the impact of question framing upon the response.*
- ❖ *Impart an image of rich information without complexity.*

The researcher identified firm informants most knowledgeable of the subject matter under study, in the form of owner/managers of respondent firms who carried out the appropriate duties envisaged by the researcher regarding the internationalisation process of respondent firms. Furthermore, recognition that a respondent's emotional involvement with the experience may enhance or decrease response accuracy prompted the researcher to elicit factual responses from respondents, which was triangulated with secondary information regarding the firms' internationalisation activities. The encouragement of respondents to co-operate with the research was promoted through the promise of a copy of the final report and flexibility on the part of the researcher to suit respondents' schedule.

The researcher enlisted the use of pretested open-ended questions and probing techniques to allow respondents elaborate on answers as a reflection on how question framing impinged upon respondents' answers and to lessen response ambiguity. Furthermore, in order to ensure that all basic lines of enquiry are pursued, the researcher enlisted the help of an interview guide¹⁴ (Easterby-Smith et al., 1991; Quinn-Patton, 2002), which facilitated the researcher to deviate from questioning sequences in order to track different or emergent issues (Easterby-Smith et al., 1991; Quinn-Patton, 2002). The interview guide contained a list of questions or issues regarding the research matter (Quinn-Patton, 2002) and enabled a researcher to constructively use interview time (Quinn-Patton, 2002). In addition, the use of an interview guide ensured that all respondents were interviewed in a systematic and comprehensive manner, while allowing interesting perspectives to emerge from the interview (Quinn-Patton, 2002) and in consideration of the need to restructure questions during the interview (Yeung, 1995). Since interviewing is considered as a social process between the respondent and the interviewer flexibility throughout the interview is considered vital, especially regarding further probing (Yeung, 1995) in order for respondents to elaborate on responses if words or phrases are used in a particular or unique way. The opportunity of using these probes permits the collection of a rich data set (Saunders et al., 2000).

4.6.1 Interview Reflections

In one respondent case, the researcher noted that the respondent seemed uncomfortable with the use of the interview guide and seemed concerned that the length of the guide was an indication of the appropriate duration of the interview. However, after ten minutes of interview time had passed, the respondent appeared reassured of their

¹⁴ The interview guide used for both key informant and respondent interviews is presented in Appendix B

contribution to the interview. On another occasion, a respondent was concerned with privacy issues and as a result, the respondent remains unnamed in the research. The researcher also observed that many respondents mentioned at the start of the interview that they could only permit twenty minutes of their time, where in fact the majority of interviews lasted in excess of sixty minutes and respondents appeared surprised at the length of time that had passed at the end of each interview. In some cases, the researcher also found it difficult to persuade the respondents to answer questions asked instead of digressing to other subject areas or previous questions.

4.7 DATA ANALYSIS

Qualitative research is strengthened in its ability to portray individual experiences in the light of a common occurrence, as the researcher develops an interpretation of data reflecting both individual experience and the data set as a whole (Ayres et al., 2003). In order to capture the complexity of the internationalisation process, it was important to apply analytical and innovative approaches appropriate to the research problem (Gilmore and Coviello, 1999) of the internationalisation process of respondent firms, barriers and challenges to the process and the role of strategic partnering as facilitator to the process. The following sections are an integrated summary of steps undertaken by the researcher from initial data organisation to generation of the findings in chapter five.

4.7.1 Data Organisation and Preparation

Following interview completion, the researcher reviewed and transcribed respondent interviews. In order to insure that the data transcription did not negatively affect

subsequent data analysis, the researcher followed transcription principles proposed by Mergenthaler and Stinson (1992:129-30)¹⁵

- ❖ *Preserve the morphologic naturalness of transcription.* The use of punctuation, commentary and word forms should be as close as possible to speech presentation and typically acceptable to written speech.
- ❖ *Preserve the naturalness of the transcript structure.* The transcript should be structured via speech markers.
- ❖ *The transcript should be an exact reproduction.* The text should be an unreduced verbatim account.
- ❖ *The transcript rules should be complete.* The transcriber should use everyday language as opposed to language theory to transcript the data.
- ❖ *The transcript rules should be independent.* The transcription should be easily understood by third parties.
- ❖ *The transcript rules should be intellectually elegant.* Rules regarding transcription should be limited in number, simple and easily learned.

In addition, the researcher included verbatim words, background noises, slang and grammatical errors. The importance of such a strategy is to ensure consistency across cases for comparable analysis (McLellan et al., 2003).

4.7.2 Noting Reflections

Subsequent to transcription, the researcher undertook interpretative readings of the data, in order to construct an appropriate vision of how the data represented the research question and objectives (Mason, 2002) and to obtain a general sense of meaning, while noting reflections on general themes or emergent patterns (Miles and Huberman, 1994;

¹⁵ (*Op. Cit.*) McLellan, E., MacQueen, K. M. and Neidig, J. L., (2003) "Beyond the Qualitative Interview: Data Preparation and Transcription". *Field Methods*, Vol. 15, No. 1, pp. 63 - 84.

Creswell, 2003). This enabled the researcher to “read beyond the data” (Mason, 2002) in order to discover underlying themes and unforeseen patterns. These patterns were generally noted in the transcripts margins for comparison with other interviews and as additional codes for use within a cross-case analysis display.

4.7.3 Coding and Cross-Case Analysis Display

In order to understand respondent firms’ experience of internationalisation, the researcher chose to isolate themes and commonalities and investigate relationships between variables and subgroups (Miles and Huberman, 1994; Mason, 2002; Creswell, 2003). Consequently, the data began to produce common themes and threads across respondent interviews. This was aided by countless readings of the transcripts and the researcher became submerged within the data until the researcher felt satisfied with the insights gained. Due to the vast amount of data generated from respondent interviews, the researcher felt that further understanding could be gained by displaying the data in such a way as to aid further data exploration. As a result, a cross-case analysis was devised (which is summarised in appendix F), to permit a systematic overview of interview data, facilitate the easy retrieval of data for presentation and dissemination (Mason, 2002) and aid the researcher’s conceptual and analytical thinking. The use of such a method enhances generalisability and deepens understanding and explanation of respondent interviews (Miles and Huberman, 1994). The display comprised variable orientated and case orientated strategies in order to facilitate “good explanations”, which according to Miles and Huberman (1994:208) “usually involve cycling back and forth between or synthesizing, strategies aimed at understanding case dynamics and seeing the effect of key variables”.

4.7.4 Interpretation and Generating Meaning

Once the researcher felt that sense had been made of the interviews through the cross-case display, it was important to go beyond the ingredients of separate respondent data and seek idiographic generalisations among all respondent firms (Ayres et al., 2003). In order to achieve this aim, the researcher sought to discover plausibility within the data and draw procedural conclusions from the data in the form of clustering and reiteration of the interview guide and patterns and themes reviewed previously. Through a clustering approach, the researcher was empowered to subsume particulars into the general in order to build a coherent understanding of the data (Miles and Huberman, 1994).

4.8 LIMITATIONS OF QUALITATIVE RESEARCH

The researcher was aware of limitations inherent within qualitative research such as arguments against validity, generalisation and reliability. Validity concerns the integrity or credibility of results derived from qualitative research (Saunders et al., 2000; Bryman, 2001). Nonetheless, according to Sykes, carefully conducted interviews yield high levels of validity (1991:8)¹⁶:

"The main reason for the potential superiority of qualitative approaches for obtaining information is that the flexible and responsive interaction which is possible between the interviewer and the respondent(s) allowing meanings to be probed, topics to be covered from a variety of angles and questions made clear to respondents".

Generalisation refers to the external validity of findings across an entire population (Saunders et al., 2000). However, qualitative findings are not intended to represent the views of an entire population but instead generalised to theory (Bryman, 2001). As

¹⁶ (Op. Cit.) Saunders, M., Lewis, P. and Thornhill, A. (2000). *Research Methods for Business Students*, Second Edition, Pearson, Essex.

such, the researcher is concerned with how an examination of the internationalisation process of Irish indigenous software firms can contribute to the lack of empirical internationalisation research to date in an Irish context. Reliability relates to the issue of research replicability by other researchers (Saunders et al., 2000; Bryman, 2001). To facilitate replication, the researcher has endeavoured to clearly set out a structured research design and guidelines considered and followed in conducting the research.

4.9 CONCLUSION

This chapter has outlined the methods and procedures undertaken by the researcher in conducting research as to an understanding of the internationalisation process of Irish indigenous software firms through the interpretative paradigm and a qualitative approach using semi-structured in-depth interviews as method of inquiry. Furthermore, the sampling mechanisms by which respondent firms were selected and procedures used to capture and analyse data were presented in preparation for subsequent chapters, which details findings and conclusions drawn in the course of the research.

Chapter Five ~ Findings

5.0 INTRODUCTION

The emergence of research themes guided by the research question and underlying research objectives throughout all respondent interviews facilitated data analysis and provided a framework to present the findings in this chapter. In the case of respondent firms, the most consistent themes that appeared under the internationalisation process were those relating to managerial experience and global mindset of the firm, initial market entry, international progression strategies and perception of overseas markets. Detailed extracts are presented from respondent interviews on each firm under these themes. In comparison, the barriers and challenges and the use of strategic partners are presented as standalone themes, with accompanying discussions of the issues contained within those themes on an individual firm basis. Research findings are presented on an individual firm basis under these section themes, in order to highlight the variety and uniqueness of each firm, which in turn serves to show the diversity of the Irish indigenous software industry and a comprehensive qualitative approach to the research. Additionally, a synopsis of the findings follows each the discussion of each section, in conjunction with an assessment of extant industry and internationalisation literature. In order to contextualise the research in terms of firm background information and to portray the diversity of each respondent firm involved in the research, the main characteristics of respondent firms are outlined in Table 5.0.

Table 5.0 Main Characteristics of Respondent Firms

	Firm A	Firm B	Firm C ¹⁷	Firm D	Firm E	Firm F	Firm G	Firm H Technologies	Firm I Software	Firm J
Business Activity	Pharmacy solutions	Business integration Software	Spatial technology software	Localisation Services	Insurance software	Mobile and wireless software	Platform software technologies	Fraud, risk management and CRM software	Logistics management software	Online accommodation bookings
Location	Dublin	Dublin	Dublin	Dublin	Dublin	Dublin	Dublin	Dublin	Dublin	Dublin
Founded	1987	1994	1997	1997	1993 Rebranded 2001	1999	1998	1998	1984	1999
Began Internationalising	1998	1994	2000	1997	1994	1999	2002	1998	1985	1999
Owner Managed	Manager Joined 2000	Yes	Manager Joined 2000	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Employees	70	40	25	150	210	24	30	50	80	37
Initial domestic Focus	Yes	No	Yes	No	No	No	Yes	Yes	Yes	No
Internationalisation Mindset	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Internationalisation Strategy	No	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
Overseas Production	No	No	No	No	No	No	No	No	No	No
Overseas Office	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes

¹⁷ GeoSoft is a pseudonym, as the firm did not wish to be named in the research.

5.1 THE INTERNATIONALISATION PROCESS OF RESPONDENT FIRMS

This introductory section examines the internationalisation process of respondent firms. Due to the considerable data generated during data analysis, it was important to disseminate the information gathered in a manageable format. This was achieved using the cross analysis display as explained in section 4.7 in the previous chapter, in order to present this information as research findings and to contextualise the principle research question and research objectives.

The principle research question is that of exploring how Irish indigenous software firms seek international markets. Extant literature posits that international expansion is considered as a function of managerial expectations and experience (Aaby and Slater, 1988). These market characteristics and managerial experience positively influence the global mindset of the firm (Nummela et al., 2004), as conditions and experiences within early phases of firm activity are likely to impinge upon firms' subsequent internationalisation process (Jones, 1999). Consequently, internationally experienced managers are likely to utilise this knowledge when engaging in internationalisation activities (Manlova et al., 2002). Therefore, this introductory section examines the impact of managerial experience and global mindset upon the internationalisation process of respondent firms and detailing the initial market entry and market progressions strategies of respondent firms and their perception of overseas markets.

5.1.1 Managerial Experience and Global Mindset

The respondent data highlighted that all managers had previous, albeit varied, international experience. One manager had established a previous company, and this knowledge transferred valuable contacts, funding and experiential knowledge into respondent firms. Furthermore, three firms undertook rebranding strategies (Firm C, Firm E and Firm G). In the case of **Firm E**, the firm had engaged in the provision of software services while undertaking product development and rebranded in 2001 as the firm's focus shifted to a product base.

"It took about...eight years of runnin as MSC...to build up the capital and build up the customer base and build up the software side of the business...to allow us to...rebrand the company to a product name called Firm E and that happened in 2001. So MSC was a really important funding machine and... a customer...magnet as well, we built up a lot of clients... so MSC is now called Firm E, Firm E is the product, Firm E the company, Firm E the person" (Firm E).

"I was very lucky...that I had the other company...(and)...there was some...excess funds" (Firm G).

The remaining managers were employed by MNEs, either based in Ireland or overseas.

"My international experience was gained largely with (MNE) for whom I worked for thirteen years...I guess that experience meant that I was very aware maybe of the future that can exist in a company that's working in an international way. I call on it when I need to...in terms of...being aware that business is done differently in different countries" (Firm A).

"(Previous experience) would have helped to understand how to deal with people...outside Ireland" (Firm B).

"Everywhere I've worked it's been international customers...so you were always looking overseas, there were no jobs in Ireland, it wasn't even a consideration...internationalisation was the first step you took...you went abroad...and you were always looking at how you...would work abroad, how you'd integrate into the cultural environment" (Firm F).

"Experiences in the past...are good to have on someone else's payroll" (Firm H).

"I thought it (previous experience) was very valuable, because you were dealing with a large aggressive American corporation" (Firm I).

In most instances, respondent managers previously held positions of responsibility or management. Similarly, such experience proved vital when forming their own companies.

"I ramped up a hundred and fifty man team...I ramped up a very aggressive growth model...had to build people, coax people (to) make things happen...and those skills are just invaluable when you go onto the next level" (Firm H).

"You acquired a knowledge and a confidence...when we went out on our own to bring all of that knowledge with me so that you've got the confidence and the contacts to...enable you to establish another business" (Firm D).

In some cases, MNE employers engaged in merger and acquisition activities. However, two respondent managers looked upon this strategy unfavourably and as a result; it prompted them to set up their own firms in competing markets to previous employers.

"There was a huge amount of politics being played...clients were not being served adequately...I felt it was an opportune time to...set up and...take advantage of the turmoil...this had created and...set up a very dedicated service" (Firm D).

"(Previous employer) was bought out...and shortly after that I decided to get out and set up...because they had become too dominant in the marketplace and...I didn't basically agree with the structure of the way they were doing business anymore...we tend to compete against them...quite successfully now we've grown" (Firm E).

This strategy enabled respondent firms to capitalise on previous employment experience and reputation, which created favourable entry mechanisms into overseas markets.

"It was very important that my own reputation at the time in the industry was strong enough that when you went out on your own that you'd actually bring in some good people very fast...otherwise the whole thing, the opportunity would have been lost" (Firm D).

"I still keep a lot of those...senior relationships I would have had in (previous employment) and...so your reputation is quite important...and those relationships that I had built up...helped me to build up Firm E in the first few years...and even today" (Firm E).

"We've brought with us from our previous lives, a very...good sound practice of being able to deliver for clients" (Firm H).

Six respondent firms sought immediate international revenue either from inception (Firm B, Firm D, Firm F and Firm J) or within a six-month period of establishment (Firm H).

"From the start, our first customer was a UK customer...based out of London, so that's where we started from" (Firm B).

"We had to go...we had to be, we were an international firm from the outset" (Firm D).

"We didn't even consider doing business in Ireland. Because Ireland is such a small market...there are very few customers with any large budgets. You don't set up a company in Ireland and think, oh I'm gonna survive on work I source in Ireland, you won't survive if you do" (Firm F).

"There was only one way to do, it had to be outside of Ireland, so...from day one we knew we had to do it" (Firm J).

"We set up an operation in Benelux within six months...and we had early successes there" (Firm H).

The remaining firms, **Firm C**, **Firm G** and **Firm I** principally sought to raise domestic revenue in advance of an internationalisation strategy. However, all three firms commenced internationalisation activities within three years of inception.

"From 1997 we basically concentrated on the domestic market and then in the beginning of 2000 and 2001 we were trying to commercialise our success and then increasingly over the period 2001 and 2003 driving up...overseas revenue as a result of that" (Firm C).

"Having established very strong links with the companies in the Irish financial services sector...I managed to sell our product to Bank of Ireland quite early on...and then our next milestone was to get in...enough cash to grow our market" (Firm G).

"For about the first year thereabouts, my customers would have been exclusively Irish and then gradually started breaking into...the UK" (Firm I).

Only one firm (Firm A) opted for a complete focus on the domestic market, without an international outlook. Nonetheless, the firm commenced international activities eleven years after inception.

"I think (the founder) just thought...here's a market...an opportunity for me to use my skills as a programmer...it started from there...there was a recognition at the time that there was a need for...a good system in the Irish market...and (the founder) felt there was definitely an opportunity to make a mark in that market...(so) we were very much focussed on Ireland at that point in time" (Firm A).

Firm E and **Firm H** highlighted the reluctance of domestic firms to purchase the firms' software, despite expressing interest. **Firm H** believes that Ireland has an inherent culture of resentment, which is responsible for this factor.

"I did talk to all the companies in Dublin, but I couldn't convince any of them...Ireland's a strange place for that type of thing...I dunno what it is in the psyche, but...they did a lot of listening...but they didn't come forward...We had two customers in England before we got our first one in Ireland" (Firm E).

"The peculiar Irish culture of just begrudgery...it is unfortunately a true facet of our culture, it's one of our negative sides" (Firm H).

5.1.2 Synopsis

According to Bell's (1995) cross-national study on the internationalisation process of software firms, firm age or size has no bearing on Irish indigenous software firms'

propensity to internationalise. Rather, the firms principally seek overseas markets due to recognition of limited domestic market size and the reluctance of local customers to purchase the software. Coviello and Munro (1997) report that New Zealand software firms commence operations with an international mindset and instigate internationalisation activities within three years of operation to physically and psychically close markets. The findings of respondent firms agree with these assertions, as the majority of respondent firms sought internationalisation from inception or within a four-year period (as indicated in Table 5.1.2). It also appears evident that respondents' global mindset and experiential knowledge gained in previous employment resulted in increased commitment to enter foreign markets and derive revenue from internationalisation activities in accordance with Irish indigenous software industry trends (Hot Origin, 2004; Irish Software Association, 2004) and supports the assumptions that managerial experience positively impacts upon the internationalisation process (Aaby and Slater, 1988; Jones, 1999; Manlova et al., 2002; Nummela et al., 2004). This infers that founder experiential knowledge plays an important part in determining initial foreign market entry and also seems to lend some credence to the suppositions of the Uppsala model of the influence of experiential knowledge regarding overseas markets (Johanson and Weidersheim-Paul, 1975). However, it is also evident that respondent firms gain knowledge from other sources, such as strategic partners, previous contacts, experienced board members and the recruitment of local employees overseas.

Table 5.1.2 Classification of Respondent Firms

Respondent	Founded	International Mindset	Time to Internationalise
Firm B	1994	Yes	0 – 3
Firm D	1997	Yes	0 – 3
Firm F	1999	Yes	0 – 3
Firm E	1993	Yes	0 – 3
Firm H	1998	Yes	0 – 3
Firm I	1984	Yes	0 – 3
Firm J	1999	Yes	0 – 3
Firm C	1997	Yes	0 – 4
Firm G	1998	Yes	0 – 4
Firm A	1987	No	8 – 12

Table 5.1.2 highlights that the majority of firms sought from inception to seek international growth. The risk of operating in international markets is considered lower for international new ventures than that for traditional firms, as firm founders and employees tend to have amassed previous international experience (Madsen and Servais, 1997). As such, most respondent firms (Firm B, Firm D, Firm E, Firm F, Firm H) seem to exhibit characteristics of international new ventures. However, in order investigate this issue further, the initial market entry mechanisms and international market progression strategies of respondent firms are examined in the following section.

5.1.3 Initial Market Entry and International Market Progression

Firm A adopted a domestic focus upon inception with the provision of a software system to domestic pharmacies and a separate application for the Irish hospital market. Based on success of the software system within the Irish hospital market, the firm received unsolicited orders to provide similar systems to UK hospitals. Due to specialisations inherent within the system, the company was aware of its limited international potential.

“Because it’s a very limited product in its scope, it was never going to make us considerably international” (Firm A).

Significantly, the UK National Health Service (NHS) announced their intention to enter a new phase of technological development in 2000. At this time, the firm was engaged in a strategic partnership to service Irish pharmacies of a large UK pharmacy chain and had previously developed part of the proposed system. This development prompted the firm to approach their partner in order to tender for the new NHS service. Their partner agreed and requested that **Firm A** convert their existing pharmacy application from DOS to a windows operating system with a view to further serving Irish pharmacies and additionally, their partner's pharmacies in the UK.

Therefore, **Firm A** did not have a global mindset upon inception. On receipt of unsolicited UK orders, the firm only then began to consider foreign market expansion activities, yet a strategy of internationalisation was never formally expressed.

"(It was) fantasy that we'd like to move further into each market...but it was never more formally expressed than that...until we actually had the markets, or we had (strategic partner) anyway" (Firm A).

The firm established a sizeable domestic base before entering the UK through unsolicited orders, client-following and strategic partnering commitments. **Firm A** discovered that compared to the Irish market, the UK required different sales mechanisms.

"Going into England, I mean we were...in effect invited in by the biggest...chain of pharmacies in the British Isles and that's very different, you know, suddenly we'd arrived" (Firm A).

The firm elected to prospect chains as opposed to stand-alone pharmacies, in order to leverage credibility of association with their principal strategic partner and quickly gain critical mass.

"We are deliberately targeting chains of pharmacies...In the Irish market we've gone for individual customers, but not England, over there we're going for chains" (Firm A).

The firm opened an overseas office based on the most convenient and best potential customer location, in order to realise this strategy, serve strategic partners and prospect potential UK customers.

Firm B, on the other hand, decided to actively target the UK market upon inception, as they recognised that the domestic market was limited in size.

"I would have always had that ambition because...what we're doing, the market in Ireland would have been quite small for it" (Firm B).

This consideration was also based on the firm's unique service offering and the attractiveness of the UK market regarding size and internationalisation potential.

"We won the customer...we had a fairly unique service at the time and...it was a service that would have been more appropriate to sell into the UK and to a larger market, so we went to the UK...we got our first customer over there" (Firm B).

Moreover, the firm felt the UK a natural market choice due to cultural similarity to Ireland and advantages regarding the geographical proximity of the UK to Ireland.

"The nature of people working in the UK is quite similar to our own, there's not much difference...Ireland is probably...to some extent seen as a regional hub of the UK and they're not probably far wrong" (Firm B).

Firm B entered international markets from inception, but soon discovered that entering international markets without first implementing extensive market research would prove a costly mistake.

"We didn't plan it well enough...we went off and built a software product without doing enough market research. We quickly discovered that we were in a highly competitive landscape (with) too many competitors that were more agile potentially than us and with more money...but it cost us maybe a million plus before we discovered that. This time we've gone to market internationally with a much better...researched...strategy...a defined plan and budget...a pull out strategy and a grow big strategy" (Firm B).

Consequently, it had to reframe its international market strategy. The firm elected to serve UK customers from a domestic base, but soon realised overseas offices were required for further market progression, especially in the US.

"The one thing we've learned is that you have to have people on the ground or you've got to be able to put them on the ground in a very short period of time. We have, in the past gone and

tried to do various visits to the US...but we found that when you get back to Ireland...when you're out of sight, you're out of mind, so it's important to have someone on the ground" (Firm B).

The firm discovered that firm reputation was an important facet of gaining entry into foreign markets.

"Having (a co-founder) as being one of the luminaries in the world in (technology area) would give us a door in and a way in...that we wouldn't have had heretofore" (Firm B).

After opening its US office, the firm obtained several minor customers, yet is still seeking important reference customers through niche market exploitation and direct customer prospecting strategies.

Firm C concentrated principally on the Irish market, despite recognising the limited expanse of the domestic market.

"The market simply isn't big enough" (Firm C).

The firm maintained this strategy until approached by UK and European companies seeking to bring inward FDI to Ireland. This prompted consideration of obtaining venture capital funding, which extended the firm's focus to international markets. Through several iterations of business focus, **Firm C** realised the firm's main strengths lay in selling enterprise-focussed applications as opposed to software for wireless mobile operators. It took the decision to target the UK as first overseas market, due to locational, cost and cultural advantages.

"I think the culture generally is not dissimilar to Ireland, I think that UK people for the most part enjoy doing business with Irish people. I think it's a reasonably accessible market" (Firm C).

Firm C therefore, believe internationalisation dependent on the development of a strong domestic base prior to seeking overseas markets.

"Put the building blocks in place (so that) we can be strong enough in our market and our domain and our expertise and then go out and sell that into multiple geographies" (Firm C).

On receipt of inward internationalisation activities, the firm sought venture capital (VC) in order to focus on the development of overseas business.

"Once you bring a VC player in, you are committing yourself to overseas revenue and future overseas revenue streams" (Firm C).

In order to secure future overseas revenue, the firm opened a UK sales office and sought to leverage previous client references and firm reputation.

"Unless you have a full time presence on the ground, it's gonna be very difficult for you to sell into that geography in a meaningful way...A lot of our business is built around reference clients, track record, integrity" (Firm C).

The firm instigated service-led assignments in order to gain entry into international firms. In this way, it hoped to capitalise on these opportunities for further sales and engaged in software licensing as a mechanism for delivering repeatable products overseas and the creation of international reference sites.

"The easiest way to get into a company...is often to do a small service based project and use that relationship then to leverage further technology or product sales into the same organisation" (Firm C).

Firm D was also cognisant of an available market opportunity to service Irish site MNEs, yet the firm displayed a global mindset from firm inception.

"The service that we were providing was to internationalise software products for companies, that didn't necessarily mean that we had to internationalise ourselves...because most of the companies...were here, so we could have just stayed here...but we had an internationalised perspective of life...so we did (internationalise)" (Firm D).

As such, the firm quickly courted a number of large international customers, typically UK subsidiary sites of US and Japanese origin. Within six months, the firm established a US office site, seeking to capitalise on early international successes, increase client numbers and viewing international expansion as a strategy to offset possible downturn risk within the European market. After taking initial internationalisation steps, **Firm D** embarked upon various promotional activities, such as low-key advertising, attendance at conferences and seminars and renewal of previous relationships to expand international sales. In addition, the firm opened two further sales offices in the US.

"Past relationships...that was probably one of the premier things...and our reputation in...the marketplace, obviously making sure that everyone out there knew. Low-key advertising...seminars...and then having a small team of...sales people" (Firm D).

The firm aggressively sought to win new customers, yet soon discovered the futility of pursuing incompatible customers and switched to a strategy of seeking customers appropriate to **Firm D's** business model. Despite the fact that the software localisation industry is generally deficient in ongoing contracts, the firm aggressively pursued repeat business from each customer. Such a strategy allowed the firm become an integral part of customers' supply chain, while simultaneously promoting and enhancing firm reputation.

"You won't make money on a first project or a second or third, it's after that when you can start making efficiencies in your system and you start understanding what they want out of it. Then you start over time...to blend your service to meet their requirements more and more. Basically, you want that repeat business so that you can actually have the opportunity to winkle your way closer into their service. So that...they rely on you so much...you can actually bring efficiencies to the table that actually make you look good internally and at the same time allow you to make money" (Firm D).

However, the firm discovered the US market was different in reality from originally perceived. The firm revised its planned internationalisation strategy to encompass budgetary planning and analysis, which served as the principal driving force for firm internationalisation.

"In terms of going international...we had a plan...and I'd say within a few months of actually getting to the (United) States, that plan was thrown out...we got there (and)...a lot of things were different...clients we thought we'd get, didn't get, clients we never thought we'd get, we did get...Very quickly the plan turned into budgets going forward and the budgets going forward turned out to be the driving factor" (Firm D).

Firm E also cited limited domestic market opportunity as principal reason for seeking overseas markets.

"It's a small market...relative to the UK and the rest of Europe" (Firm E).

The firm undertook a prolonged software development period before embarking on an international market strategy. During this time, **Firm E** provided consultancy services to fund research and development activities. Due to apathy of domestic firms in relation

to the firm's software, **Firm E** began to prospect international sales based on CEO international reputation and credibility, resulting in acquisition of a licensing contract to a large UK building society.

"The British were more open to...making the investment and making something happen...it's very slow for Irish financial institutions to do any investment in software" (Firm E).

Following entry into the UK, **Firm E** elected to enter Holland, Denmark, the US, Australia, New Zealand and Canada, countries previously inhabited by the firm's founder.

"Well more or less where you see (Firm E) customers, you'll see that (the founder) has been in that country before. So really, going back over contacts...The track record and the reputation was there and some of them were customers...that I used to manage. So it's a question of going back over old ground and renewing relationships and building them up on the basis of that" (Firm E).

The firm's market progression strategy consisted of primarily prospecting and securing international customers based on rekindling previous relationships and contacts, followed by opening an overseas office before investing in the market.

"We attack the market from outside it and we look for doors to be open and get in front of the right people. Once we get a customer, then we start opening an office and we hire people and grow the business" (Firm E).

The firm believes customer references an important element of **Firm E's** market progression strategy, while consecutively enhancing overseas reputation and credibility.

"The advantage...is in the customers that we have, which is the big the customer references, which are very positive and the product set in terms of the coverage that it has across the industry that we're specialising in, and that's impressive as well and those are the kind of things that companies are looking at" (Firm E).

Firm F, similar to other respondent firms, were aware that the Irish market held little opportunity for the firm in comparison to international markets

"It's such a small market...you focus on where the customers are and the customers are international generally" (Firm F).

As such, the firm quickly secured initial foreign customers in Germany through internal championing efforts conducted by former international contacts known to the firm. As

such, the firm demonstrated international client-seeking behaviour, regardless of cultural issues and locational advantages of exporting to a nearby international market.

"That's really what happened, we knew someone who gave us a good reference, we were able to get in, sort of bypassing the normal channels" (Firm F).

Firm F secured a contract in the UK following initial internationalisation activities in Germany. The contract was secured via previous contacts and permitted further product and service development.

"We knew a guy who we'd been to college with...who was working in a UK operator...he gave us some small contracts to get us a reputation and we've built on that" (Firm F).

The firm believes that previous contacts and networking activities are paramount in gaining international entry.

"You always sell through contacts, networking, people changing jobs...you always follow the people that are going to promote your product if you can. You also follow the reference sites and the customers, but it's the people that matter, because it's the people that are going to be making the pitch and representing you. So you always look for some back door, some angle into the customer and try and get the sale" (Firm F).

The firm sought to gain market credibility by targeting market leaders in each country, hoping that other companies imitating market leader activity will follow their example and consider **Firm F** as a potential supplier.

"We have to try and break into the leader first and then use that. We're always trying to learn from what we do; it's a constant process of educating ourselves in how to do business" (Firm F).

By assuming a learning organisation role, **Firm F** employs constant feedback of experiential knowledge regarding international markets and customers into the firm.

"We're a small...organisation...constantly reiterating and refining how we do things and hopefully getting better and...reducing...where we waste money or waste time, so we're always trying to feedback. And...if we learn something from one market in Eastern Europe, you know we'll try and apply it in the next market" (Firm F).

The firm contends that international expansion is dependent upon overseas reference clients in comparison to local reference sites, which highlights the importance of seeking international markets from inception.

"If you are doing business and you've just two or three sales and they're all local, you don't have credibility. If you go to someone overseas, you need overseas references to gain credibility

in customers' eyes. I mean you cannot go to Germany and say use our system if you've only got a reference that's in Ireland" (Firm F).

Nonetheless, the firm did not instigate a formal approach to seeking overseas markets, preferring to use an emergent and *ad hoc* approach.

"I don't think we really had a formal internationalisation strategy, it evolved as we went along, it wasn't something written in stone" (Firm F).

Firm G gained initial domestic success on the back of the founder's previous contacts and reputation. Nonetheless, an internationalisation strategy was seen as an inevitable strategy.

"There isn't enough of a market in Ireland for practically anything, so you have to (internationalise)" (Firm G).

Consequently, the firm began international promotion activities by means of trade shows and seminars and gained entry into a large German financial institution seeking new innovative technology.

"We met...at a conference that had an exhibition element...they were out looking for new things and they were interested in what we had on offer and that's how it all began" (Firm G).

Firm G gained domestic success subsequent to obtaining the firm's first international sale and implementing an international customer targeting strategy was emphasised. Mechanisms for dealing with international customers and strategies were required to replicate initial successes.

"You...need a plan, but you also need a method and a knowledge and it's pointless having a plan if you don't know how to sign up your first two customers. What you really need to do is...get your first customers...get your product...out and then begin to replicate that. You've got to get a market that's suitable to replicate...to get traction" (Firm G).

In order to further software development, **Firm G** realised that additional funding was required and consequently sought external venture capital (VC) funding. The agreement required external employment of a different chief executive officer (CEO); unfortunately, this strategy proved unsuccessful.

"Just prior to...that CEO coming on board, we made our two most important sales...we didn't have a sale at all during the term of the foreign CEO" (Firm G).

Firm H carried out extensive research into opportunities in the domestic market and realised that competitive advantage lay in international markets.

"We studied it quite a bit before we started the company...and the issue for Irish companies is that there is no domestic market" (Firm H).

The firm chose to serve the UK market from a domestic base and within six months had established an overseas operation in Benelux, due to location and cultural advantages. Early successes followed as the firm capitalised on media reports that Ireland was receiving regarding its high growth economy at the time. Reputation and credibility amassed by the founders during previous employment was also extremely important.

"When we went in the door we were actually well advertised to everyone before we got there and people were interested to see you. That had built relationships and then it was just down to the deal making skills we had brought from (previous employment)" (Firm H).

Firm H sought early innovators and internal organisation champions in each foreign market entered.

"You look for the fireman and you look for the security man. The fireman is usually a guy who has high visibility in the organisation, young, two levels below the top and wants to be at the top. Therefore, he's got to set his goals at about 180% above everybody else's to get attention...and speed his ascent. The security man is probably at the top and there's so much changes coming at him that he feels he could be vulnerable...and needs someone to come in and rub his back and tell him everything is going to be okay...we'll sort it out for you. You're allaying fears there and we tend to be able to deliver" (Firm H).

Such a strategy allowed the firm gain advanced entry into foreign firms and capitalise on the firm's previous experience of dealing with large MNEs. **Firm H** entered the US with a similar market strategy and opened a US site office. In 2000 however, customer demand for customer relationship marketing (CRM) software collapsed and the firm faced the difficult proposition of restructuring the firm, having opened several overseas offices and with two hundred and fifty people on the payroll.

Firm I elected to serve domestic customers through business application software, subsequent to an unsuccessful period as an IBM agent. After a year of domestic

success, the firm started to break into financial services in the UK with measured success but with the ultimate intention of entering the US market.

"Every Irish company that wants to go abroad, the first place they look is the UK...we never cracked it funnily enough, we just used it to leapfrog...the big apple was always the States" (Firm I).

After achieving little success in the UK, **Firm I** opted to install representative status in the US, swiftly followed by overseas offices in Rotterdam and Basle. Initial US success resulted in resource constraints that demanded closure of the Swiss office and a switch from a primary focus financial to logistical software.

"It was much more expensive to get to and the costs there were enormous. We decided to stick with Rotterdam...and bring it through the cycle. In the meantime the US began to happen for us and we began the process there as well" (Firm I).

Similar to other respondent firms, **Firm I** chose to leverage previous contacts and reputation in order to gain entry into foreign organisations.

"The longer you're in the game, the better known you are, the longer you're around and...the longer you're known...it gets easier...Once you get out and running and your reputation is established and once you know how to do business, the world is your oyster, because it's limitless, the size and scope of the market" (Firm I).

In addition, the firm canvassed domestic customers to gain entry into their headquarter MNEs and actively engaged in customer prospecting and strategic selling strategies through identifying gatekeepers in each organisation.

"You've got to decide who you're selling to and launch your campaign at them. Then you've got to figure out who can block it and you've got to figure out their agenda. There's no point in selling to someone who doesn't have the budget. So if you have a definite game plan...about who you're going to target and how you're going to target them" (Firm I).

Firm J recognised that the domestic market was an unviable option for the firm. As such, international markets were viewed as the only alternative.

"There was no way we could do it with just Ireland. I mean the company could not have made any money in Ireland" (Firm J).

The firm's service offering is principally concerned with the exploitation of information and technology. The use of internet technology permitted the firm to become international from inception and consequently, the firm felt that the decision to

internationalise was an unconscious one, as such; the firm received a US order as the firm's primary transaction.

"You had a sense of where the tourism was going and you started in the bigger cities...It's not like we had to make any decision to go out into the big bad world" (Firm J).

Firm J opened an overseas office in Sydney shortly after inception and within several months, had entered the UK, Holland and the US. The firm undertook country visits to canvass new customers.

"We went in there and...we went out for beers with people...and got to know people rather than blasting your way into a territory" (Firm J).

The firm discovered that once some customers signed up, others followed and this strategy soon became self-perpetuating.

"Once you had a worldwide scale of what you were and what you did, other countries came in no problem at all" (Firm J).

5.1.4 Synopsis

Bell (1995) maintains that Irish software firms tend to enter international markets via direct exporting and or agent/distributor as opposed to alternative entry mechanisms of licensing, joint ventures or indirect exports to UK, US and German markets, with a limited number of firms instituting overseas establishments, which served as sales and marketing offices. The choice of market was attributed to client-following activities, sectoral targeting and computer industry trends as opposed to issues of psychic distance. The researcher found similar patterns among respondent firms. Initial market entry choice was UK based, while remaining firms entered Germany and the US in accordance with the first market and general export trend of the Irish indigenous software industry (Crone, 2002; ICT Ireland, 2003b). The age and size of respondent firms did not exert any influence on the internationalisation decision. Additionally, the majority of firms engaged in direct exporting activities, except in the case of Firm E

who employed licensing and Firm J who utilised internet technology to gain initial foreign market entry.

The findings agree with Coviello and Munro's (1997) findings who maintain that initial international expansion is driven through network relationships, with partners guiding the selection of foreign markets from relationships developed with a larger firm in the first year of business activity. However, respondent firms appear more influenced by strategic partner activities than being part of a network of relationships, as firms chose to establish significant strategic relationships, usually with one other firm and local firms as opposed to creating several relationships with several firms, or joining an already established network (this issue is further discussed in section 5.2). In addition, Coviello and Munro's (1997) study fails to account for the influence of prior contacts and relationships incurred in previous employment, whereas respondent firms seemed to place a large emphasis on the use of previous contacts to gain entry into overseas organisations (Firm B, Firm C, Firm E, Firm F, Firm H, Firm I). Such strategies enhanced firm reputation and credibility and allowed respondent firms exploit these reference sites for further international sales. Credibility in foreign markets was also considered an important facet of international expansion. In addition to previous contacts, through recruiting a varied board of directors, the use of strategic partnerships coupled with aggressive marketing and promotion strategies served to both promote and facilitate respondent firm internationalisation activities.

As noted in section 5.1.2, the majority of respondent firms sought international markets within a three-year period with proactive internationalisation strategies. Additionally, these firms are dependent on high technology, have a niche market focus, engage in

interfirm relationships, exploited experiential knowledge, leveraged previous contacts and relationships in seeking initial overseas markets and strategically manipulated scarce firm resources. This suggests that these respondent firms exhibit characteristics of international new ventures (Knight and Cavusgil, 2004), as they seek from inception to derive significant revenues from overseas markets (McDougall et al., 1994; Knight and Cavusgil, 2004). Firm C and Firm G however, did not seek international markets from inception. Alternatively, these firms sought to service the domestic market before rebranding and seeking venture capital in order to internationalise. However, upon the initiation of overseas expansion, Firm C and Firm G proactively sought international customers and engaged in strategic partnering activities to leverage international sales, similar to other respondent firms. This suggests that these firms may be classified as “Born-again Globals”, who according to Bell et al., (2001) are characterised by an initial domestic focus until a critical incident, such as change in ownership, acquisition or the internationalisation of domestic client prompts an outward market-seeking strategy. Firm A however, exhibited a form of client-following and unsolicited order strategies. Networking activity appeared to play a significant role in relation to initial entry strategy, as the firm’s strategic partner influenced the firm’s decision to enter the UK market. The case of Firm A therefore supports the internationalisation process suggested by Coviello and Munro (1997).

Table 5.1.4 Initial Internationalisation Process of Respondent Firms

Respondent	Initial Internationalisation Strategy	Market	Trigger	Strategy
Firm A	Reactive	UK	Unsolicited order	Client-following
Firm B	Proactive	UK	Cultural and locational advantages	Market-seeking
Firm C	Proactive	UK	Market, locational, cost and cultural issues	Market-seeking
Firm D	Proactive	UK	Leveraging previous relationships and contacts	Client-seeking
Firm E	Proactive	UK	Leveraging previous relationships and contacts	Client-seeking
Firm F	Proactive	Germany	Leveraging previous relationships and contacts	Client-seeking
Firm G	Proactive	Germany	Seminar Networking	Client-seeking
Firm H	Proactive	UK	Leveraging previous relationships and contacts	Client-seeking
Firm I	Proactive	UK	Locational and cultural advantages	Market-seeking
Firm J	Proactive	US	Internet enabled	Client-seeking

Table 5.1.4 is significant in highlighting the initial internationalisation steps of respondent firms. However, it also demonstrates that the findings agree with the assumption of Lovelock (1999) that firms may use different forms of entry modes such as market seeking. This is in comparison to the suppositions of Erramilli (1990), Majkgård and Sharma (1998) who identify client-following and market-seeking motives as significant influencers in the entry mode decision for service firms. Furthermore, the findings of respondent firms agree with the results of Brouthers et al. (1996) study, which found that US software firms display market-seeking as a primary motive for seeking overseas markets. Additionally, it was also noted by the researcher during respondent interviews, that respondent firms whose managers were not firm founders (Firm A, Firm C), appeared to hold more passive attitudes regarding initial entry choice, in comparison to owner managed firms.

After taking initial internationalisation steps, respondent firms followed various market progression strategies in quest of further internationalisation. In some cases, respondent firms cited defined internationalisation strategies (Firm B, Firm D, Firm E, Firm G, Firm H, Firm I and Firm J), whereas other firms followed emergent and *ad hoc* internationalisation activities (Firm A, Firm C and Firm F). Various respondent firms opted for UK followed by US entry. US entry is also a common feature of Irish software firms due to market size and opportunity (Forfás, 2003). The findings of respondent firms concur with this assertion. Additionally, respondent firms were conscious that US entry required a vast amount of resources and as such, many respondent firms opted to concentrate on UK and European markets until firm resources had reached a sufficient level to attempt US entry. The majority of respondent firms considered UK entry a logical first step in the internationalisation process (Firm A, Firm B, Firm E, Firm C, Firm H and Firm I). Nearly all respondent firms installed representative status or established overseas offices, contradicting Bell's (1995) study. These offices were primarily located in the UK (Firm A, Firm C, Firm E, Firm I), Europe (Firm E, Firm F, Firm H, Firm I), the US (Firm B, Firm D, Firm E, Firm F, Firm I) or Australasia (Firm F, Firm J, Firm E). Such activities permitted respondent firms to gauge potential market opportunity and place a foothold in the market without large investment, while seeking and prospecting new customers (Firm A, Firm B, Firm D, Firm F, Firm H, Firm I Firm J), while Firm E primarily sought to secure customers before opening overseas offices. Only one firm failed to initiate an overseas establishment (Firm G). In addition, the function of these overseas establishments was primarily concerned with sales and marketing functions as opposed to overseas production facilities, which in part supports Bell's (1995) study.

Market choice seemed to be generally determined through seeking the most appropriate markets on the basis of product suitability and logical progression to the UK as first overseas market, followed by US entry, as opposed to cost reduction strategies. Respondent findings seem to contradict presumptions underlying the eclectic paradigm. Respondent firms displayed an absence of rational-decision making and overseas market considerations in the form of ownership, location and internalisation advantages to engage in foreign direct investment activities (Dunning, 1980; Kogut, 1983; Erramilli, 1990; Rugman and Verbeke, 1992).

Furthermore, the international market progression strategies of respondent firms do not appear to correspond with the service internationalisation framework presented by Edvardsson (1993) who suggests that service firms primarily engage in domestic prospecting strategies before embarking on an internationalisation strategy. Additionally, the findings do not seem to support the applicability of the Uppsala Stages approach to service firms as prescribed by Roberts (1999), who presents a stage framework where firms principally seek to serve domestic markets with no export activities. The internationalisation processes of respondent firms appears to consist of the majority of firms committing to overseas revenue from inception, as opposed to an initial overseas evaluation period followed by commitment to international revenue.

Additionally, the internationalisation activities of the majority of respondent indigenous Irish software firms appear neither gradual, incremental nor sequential. Therefore contradicting suppositions of the Uppsala School and the Innovation-related frameworks which present internationalisation as a gradual and incremental process, with the establishment of overseas subsidiaries and overseas production facilities in the latter part of the firm's internationalisation strategy, with commitment to

internationalisation activities being built up over time, as the firm enters successive foreign markets, as opposed to an international mindset from firm inception (Johanson and Weidersheim-Paul, 1975; Johanson and Vahlne, 1977; Welch and Luostarinen, 1988; Johanson and Vahlne, 1990; Anderson, 1993; Hadjikhani, 1997; Fletcher, 2001; Whitelock, 2002).

In sum, the internationalisation process of respondent firms appear to conflict with the overall suppositions of traditional internationalisation theory and foreign direct investment theory, while partial support was found for the network approach and some aspects of the Uppsala process model. However, the theory of international new ventures (INVs) appeared to hold most merit, in terms of firm characteristics and internationalisation behaviour, as illustrated previously in section 2.9.2. The following findings section will examine respondent firm's perceptions regarding overseas markets to further investigate the impact, if any, of psychic distance on the internationalisation process of respondent firms.

5.1.5 Perception of Overseas Markets

Firm A entered the UK on the basis of unsolicited orders and client following strategies. The firm is contemplating proactive future market entry into Continental Europe, Commonwealth countries and the US.

"In not all countries (in Continental Europe) are chains allowed...and from that point of view that's not necessarily the kind of market that we want to go into, even though that's in a way what Ireland...is like. There are limited opportunities...then you've got the cost of...customising the system to work in that market and from that point of view you've got your translation costs as well" (Firm A).

However, the Commonwealth countries present different challenges in comparison to Continental Europe and the US.

The Commonwealth countries...there's a lot going for those, because from our point of view the health system tends to be the same as in England or Ireland...therefore, there's not as much modification to the package...but it's got to be easier than doing it for Continental Europe" (Firm A).

Similarly, the US market, despite appearing attractive due to market size and potential, would present challenges to **Firm A** due its fragmented nature.

"The USA on the face of it should be very attractive, fifty-five thousand pharmacies, but...we'd also be aware that it's a very fragmented market. In terms of...potential competitors...most of the companies are actually smaller than we are" (Firm A).

Therefore, **Firm A** based the decision to enter further foreign markets on the evaluation of health system similarity to Ireland and the UK. Product modification issues hold more consideration than cultural concerns. This is evident by the fact that **Firm A** is seeking to penetrate Continental Europe and the Commonwealth countries ahead of US entry.

"We would go for a market similar to ourselves in terms of the healthcare system...because we need those features to be in place. We'd definitely go to Continental Europe and the Commonwealth countries first and then look at the States" (Firm A).

Accordingly, **Firm A** is confident that increased strategic partners involvement and capitalising on existing contacts will pave the way for further internationalisation activities.

"Obviously with (strategic partner), we probably have the best reference site in terms of pharmacy in the world and from that point of view, we can ride on their tail...in any market, just about. What we will rely on is getting introductions to key people in each market. We will be using other contacts as well...one person we know, to another person and so on" (Firm A).

Furthermore, overseas acquisition strategies could also facilitate this expansion.

"Certainly the issue has come up and certainly wouldn't be shy about doing it (acquiring) if we needed to...as that's obviously one way of getting into these markets" (Firm A).

Firm B perceives the Irish market as a regional hub of the UK and having similar business practices. Pertaining to business culture and operating practices, Continental Europe and the US however, present different market propositions than the UK and Ireland.

"They have different ways of doing business they have different decision-making criteria. We have found (Continental Europe) a lot more insular...we tried it at one stage and we found that

quite difficult. There's language barriers...cultural barriers and albeit with the European Union, it hasn't really broken down any...barriers. I would say we're...more closely aligned as a country to the UK and the US" (Firm B).

It is evident that **Firm B** places a large emphasis on culture and language issues when evaluating overseas markets.

"Even when you're selling technology into those countries, it's easier to sell technology if you don't have the cultural and language...difficulties or hurdles to cross before you even get to that stage" (Firm B).

As such, the firm has chosen to primarily seek expansion in English-speaking countries.

"Our present challenge is the US market...and...potentially...Australia. So, you can see how we've moved through all of the English Speaking countries. We wouldn't have ever really looked at the Asian market" (Firm B).

Accordingly, future growth for the firm is dependent upon further internationalisation activities within countries with similar culture and language to Ireland.

Firm C likewise, believe the UK market more accessible than European and US markets.

"The cost of entry, or the cost of exploring the UK as a market, certainly factors less than some European markets. In other European markets, there's no question that you have...language barriers or cultural differences that make it more difficult to sell into those markets. If you look at Spain and Portugal...that's a bigger challenge for a company from Ireland selling into than maybe...Benelux, Germany...(and the) UK. If you look up at Scandinavia, you have another set of market activity again where they have a very strong hub of their own technology companies...who tend to cover that market" (Firm C).

The firm is cognisant of the US as a potential market in terms of cultural similarity and size. US technology has tended to lag behind Europe to a certain degree and is creating an unfavourable market for the firm.

"It would have been a difficult market for us to enter to date, there's a limited side to what the return on investment would be" (Firm C).

In terms of future internationalisation activities, the firm may seek the acquisition trail and has developed several market strategies with a long-term focus with the aim of aggressive yet organic growth.

"We will also consider acquiring our way to further growth, but it will have to be right for us" (Firm C).

Firm D consider cultural and language issues irrelevant to internationalisation due to the nature of the firm's business. Consequently, the firm believes that issues of culture are taken as given and look beyond those issues to other influencers of market entry.

"We're aware of every cultural nuance out there because of the work we do. We've been doing it for years...(and) it's always been in the international market front...so culturally...we know most issues. In essence it's (about) having people there who are...technically savvy and culturally aware of the whole thing and our people are" (Firm D).

Therefore, the **Firm D** considers market and client-following issues more prevalent than cultural or languages differences, particularly regarding potential overseas offices.

"We've actually decided to stay right in the middle of...the software technology sector. So you start thinking about software companies...we want repeat business, where are those clients? In essence, they're here in Europe, where we have a presence or they're in the United States" (Firm D).

Concerning future international growth, the firm is concentrating on maintaining current relationships, while searching for potential customers who match the firm's current business model in order to acquire pilot projects with the hope of obtaining further sales based on those assignments.

"We would have a short list of companies that we know would fit the bill and we would try over time, through meetings...emails...seminars to get a pilot project and once we get a pilot project...that's traction going forward" (Firm D).

Firm D have also implemented various contingency strategies with the express aim of preserving current business and offsetting risk whilst searching for new clients.

"There has been a greater emphasis on ensuring the longevity of the company. We've put in this major continuity plan. If we were out of business for a week, we'd lose everything" (Firm D).

Firm E was conscious of the impact of potential cultural differences when entering foreign markets.

"Certainly in Europe I'd seen them all (cultural issues) and knew how to deal with them. There was a huge amount of experience coming from a player like (previous employer) that was brought into (Firm E) for free. We're dealing in the niche of financial services, so...it's a globalised business already...therefore; you're not walking into kinda these completely strange environments. These companies are multinationals, so they are used to seeing foreign cultures coming in. We're...dealing on a global basis but because we're in a niche...it's a village within the globe" (Firm E).

However, the firm chose markets similar to Ireland and the UK in terms of language and regulatory issues.

"We stayed in English speaking territories...we knew would be close to the UK, Irish regime in terms of the government and the way fiscal policy works...and the type of products that were being sold. So, we tried to stay as...close as possible to what we were used to. The Nordic countries and Benelux...they speak English and they're used to the...British...Anglo type ways of thinking (and) they can speak the language. We stayed away from places like Germany, the Southern European countries...they're for really days really when you've established a base in English speaking countries" (Firm E).

On the other hand, despite the attractiveness of the US market in terms of potential sales and cultural similarity, the firm postponed US market entry, as it had concerns regarding financing and other firm resources.

"We stayed out of the States until we had enough money to throw at it. You know to go into the States, even...in terms of three or four people...you have to keep them there for a year and you actually spend a million before you get any return...so you need to have deep pockets...and you need to stick by your convictions and work very hard" (Firm E).

Regarding future internationalisation strategies, **Firm E** anticipates entering challenging markets such as the Asia-Pacific region, Southern Europe and Eastern Europe through collaboration activities and by following a similar internationalisation strategy.

"I think the English speaking countries are easy to do now from where we sit. The big challenge would be somewhere like China...Japan as well, it's a massive market...Asia pacific, that's really where the action is, they'd be the new markets. Germany, Southern Europe, they'd be new growth markets, Germany is very heavily regulated. There's quite a few players in there already...probably go in with a partner. The Southern European countries are high growth markets as well, Spain, particularly Portugal. Italy is a bit heavily regulated, Greece is growth, Eastern Europe is growth. That will probably be the next market for us in Europe. So we'll use a combination of partnerships...and...first customer type approach as well, whichever gets us there quicker" (Firm E).

This strategy will be with the added deliberation of possibilities of initial public offering (IPO) and consideration of the acquisition trail.

"It's (IPO) something that will probably happen naturally in the next couple of years...In some cases if we can find companies that have customers and have staff that can understand our...business, then we're interested in that (acquisition)" (Firm E)

Similarly, **Firm F** was aware of which overseas countries would provide challenges regarding cultural incongruity.

"Irish companies have traditionally succeeded very well in countries like Austria...Germany to a lesser extent. You would avoid totally France, because small Irish companies and a lot of French companies cannot do business in France, it's just a cultural thing, likewise Italy.

Portugal would be very, very favourable, Spain and then some of the Eastern European countries such as...the Czech Republic, Romania would be very favourable to Irish companies whereas...Poland would not. I mean some of the barriers would be cultural, like say France, you just cannot do business. Italy is very difficult because of the political climate...others would be GDP based so there's no point in...trying to do business in a very poor country. Like, there's no point in going to Belarus, they don't have the money to pay you" (Firm F).

However, **Firm F** realised that in order to compete internationally in a meaningful way, the firm should primarily seek to enter commercially appropriate markets and subsequently examine country-specific factors impinging upon internationalisation activities.

"You can only operate in countries where there's a commercial model that's valid, so I think you have to look at a number of factors. One is, are you going to be successful commercially, two, can you do business in that country or is that just impossible, like maybe it's very difficult to understand...the climate" (Firm F).

In addition, **Firm F** contemplated other contingent factors such as intellectual property (IP) protection and geographical location. Nevertheless, the firm considers commercially appropriate markets a foremost deciding factor when engaging in overseas investment. As a result, **Firm F** entered Germany as opposed to succumbing to the traditional choice among Irish indigenous software firms of UK entry.

"You have to be careful...you're looking (at the) fact (that) it's commercial, cultural, protection of your IP and based on that you decide where to focus and some of it would be geographical as well, like...a local market will always go first. A lot of Irish companies would traditionally look to the UK, that's not something we really did...we went to Germany first. You look at...common culture, English language...Australia, New Zealand, Canada, America. People tend to go to those markets because of the common culture, sometimes that's a mistake because the commercials aren't right. I think you have to look at a whole range of factors when deciding where to go" (Firm F).

The firm has high ambitions regarding future market progression, including an alternative investment market (AIM) listing and an aggressive long-term growth strategy with the express aim of becoming a recognised international market leader and in consideration of advantages of relocating to the US. **Firm F** is looking at acquisition sites, prompted by the firm's venture capitalists.

"We could go for a listing on the AIM markets in London...(but)...in five years I'd hope this company would be at least five to eight times its current size, would have sales offices around the world, but moreover is known for being a leader in its field, and has a track record of five years innovation, has patents and IP...and is recognised internationally. There's no point in

having recognition in Ireland, what you need is international recognition, and that may mean that the company has to be based in the US" (Firm F).

Firm G stressed the importance of recognising cultural variances in terms of both differing countries and differing industries when considering internationalisation.

"You need to learn...who to contact, also need to know how to deal with people because although there are probably national differences...in cultures there's also industry differences in culture" (Firm G).

Such considerations lessened exposure to international culture differences and highlights the firm's pragmatic approach to internationalisation.

"You really need to account for all these environmental factors and if you don't have...at least...the education to be able to assess the risks. It would better to stick with the Irish market than get burned by your ambitions" (Firm G).

However, this attitude may be compounded by the fact that the firm is currently seeking merger opportunities with larger market players.

Firm H was also aware of differing cultures overseas, predominantly in Europe. However, to **Firm H's** surprise, the firm discovered a distinct lack of entrepreneurial spirit in many European countries.

"There's very definitive culture issues, when you go to...Continental Europe, I mean it is just amazing, how unentrepreneurial these people are... it is just unbelievable. The mentality is very selfish...and they...treat the company like the government. It's something that I must work out to...maximise what I get...not what can I do for you, and that's definitely not the attitude in Ireland" (Firm H).

Additionally, analysis of the European market revealed that in order to retain a sense of entrepreneurial spirit while internationalising, the firm would have to undertake different strategies in comparison to the domestic market and avoid countries like Germany where market characteristics are unfavourable.

"The continent is vastly different from here. Belgium, outward looking, trading nation...multilingual, poor domestic markets...but...they're probably a good base. The French, the only way you're gonna do business there is by looking like a French company...You'd be better off setting up an agency in France, and then having to buy back the agency, so that once you've set up the agency, they will adopt the entrepreneurial spirit because you will have to buy them back at some stage...Germany is just such a closed economy...There are the largest companies in the world who go in on a worldwide brand and have huge money to pump into the market...and there would be German software companies, and there's no room in between...I

don't know of any Irish software company that went to Germany and succeeded and they are companies with German clients...most German companies will actually launch themselves and they can exist in Germany for ten to fifteen years...huge market...its got its own language, its own culture. You know there's a lot more French software companies launching on the world than German and that's saying a lot" (Firm H).

In order to counteract these phenomena, **Firm H** directly employed overseas personnel in order to bring an increased sense of cultural awareness to the firm, while at the same time allowing overseas employees to embrace the entrepreneurial mindset of the firm. Being culturally aware permitted the firm adapt internationalisation activities to suit particular countries and facilitated locational decisions concerning overseas offices.

"We tried to take people in all those markets and they bring maturity to the business...you've got to understand the cultural differences and managing, mitigating the risks and maximising the opportunities, knowing the cultural differences and knowing the different things...that affect you" (Firm H).

The firm found the US market a different and challenging proposition of European markets.

"They are ultra aligned with their company, but on the basis that the company is gonna have agreed mentalities and that they will fight then off that, and they will massively oversell themselves as individuals...I mean you may just dismiss automatically by about seventy percent everything you hear in a job interview in the US...and it's difficult, you're learning going out into the US and you're going out a virgin" (Firm H).

Despite these issues, **Firm H** believes that working on instinct and striving to make quick decisions will determine internationalisation strategy and ultimate firm successes.

"You know going out into these territories, you can be just bamboozled and, and you know there's a lot of guttural stuff that you have to really learn very fast. You need to learn to make decisions very, very fast. I mean if you feel like you've made a mistake, act. If your stomach is telling you, you made a mistake, don't stay there to try and work out the numbers, you know, they're probably right" (Firm H).

The firm may seek further growth through acquisition or increased investment in current markets to achieve critical mass. As such, the firm wishes to be considered an early winner in the indigenous software market. If this strategy is successful, the firm may consider an IPO strategy.

"(Firm H) will be sold or floated in three years time. You either grow or die in this business. It's there to create a model of software companies that can be built out of Ireland and can deliver very serious profit that will be doing fifty million plus and it can either go on as an independent company to be an acquirer of other companies or it will be sold, and the reason will

be...there's a very simple test behind it...would our sales grow at a greater volume belonging to another company than they would independently. That's the only test. Keep it independent as long as you attract funds...to continue the growth because...we have to build up critical mass" (Firm H).

Moreover, **Firm H** believes its varied board of directors will significantly contribute to the firm's current and future internationalisation strategy in terms of experiential knowledge and credibility transfer into the firm.

"I'm lucky that...we actually have a beauty parade. People were put into the company for an IPO, they invested in it and they had a lot of credibility on their own base, in their own way and that transfers into the company...The current people on our board are really...relevant to the type of transactions that we will be doing over the next two, three years and we would be looking to...buy companies and that's the type of experience that would become invaluable because all of them have experience of that" (Firm H).

Firm I was aware of the cultural issues involved in seeking overseas expansion, particularly in differences between the domestic market, Continental Europe and the US.

"Europeans are different, Continental Europeans are different, Irish are different, English are different. With "Uncle Sam" (the US) it's one ginormous economy and they all think the same, talk the same, same way of looking at things" (Firm I).

Firm I felt that previous international learning was an important source of experiential knowledge when dealing with international customers, particularly in comparison to Irish customers.

"Having a...large American corporation as a customer, I learned a couple of things. When you are with them when you're dealing with large customers like that, you have to deliver...Cost is a secondary importance and they will pay well and if they...get to know you they can be just as chummy and friendly... as...your typical Irish customer...I'd say that's the most basic lesson of all...particularly if you wanted to do business in the States...For myself...to have gained that experience was invaluable, because up to that it was little smaller projects...with Irish companies, where the mentality is completely different" (Firm I).

The firm anticipates long-term international market growth through the firm's current business model. Future international progression strategy will consist of a further concentration on the US market, as opposed to European expansion.

"We're not planning any radical developments or departures from our current business model...we have decent market share, we have huge potential ahead of us in the States...I would hope, that we're doing a lot more over there rather than here, that a bigger slice of our turnover is coming out of the US...rather than out of Europe...and if we can do that in five years, I'll be happy" (Firm I).

However, the firm firmly rules out any acquisition possibilities while internationalising.

"I fundamentally distrust the idea of acquisition. You want to be very... lucky to find a company that's exactly where you wanna be and small enough that you can buy them" (Firm I).

Finally, **Firm J** also showed an awareness of foreign cultural disparity. The firm believes that an informal approach to international business is preferable when engaging international customers.

"Doing business in different cultures is challenging, but if you can make it as near as what you're used to as possible I mean being Irish and being somewhat genial sometimes and prone to having a beer, I mean people get over it. Again, our business is relaxed most of the time...it's not a suit and tie environment, so people...at the far end in...Chile or whatever would have the same attitude to life" (Firm J).

Firm J feels that the firm has achieved a secure market position, which will be difficult for potential competitors to replicate. The firm's future internationalisation strategy will consist of further expansion to consolidate their market leader standing.

"The reality is that it's unlikely that someone is going to do our thing again. We hope that people would try and they don't succeed very well because there's not enough of a difference between anyone new coming in and what we do already, that's the scenario" (Firm J).

5.1.6 Synopsis

Table 5.1.6 is significant in highlighting the basis on which respondent firms sought and will seek future overseas markets. All respondent firms demonstrated an in-depth knowledge of overseas cultural differences in foreign markets. The majority of firms consider seeking appropriate markets a deciding factor in the instigation of an internationalisation strategy, while the remaining firms sought overseas markets based on cultural, language and regulatory issues. However, respondent firms which consider appropriate markets a deciding factor of overseas market entry, had previous internationalisation experience, serving to highlight the importance of experiential knowledge on the internationalisation process of respondent firms and while not explicated stated, it also seems that cultural issues underpinned many of the respondent's first and subsequent market entry strategies.

Table 5.1.6 Deciding Factors of Market Entry

Respondent	Culturally Aware	Culturally Sensitive	Basis for Further Market Entry
Firm A	Yes	No	Appropriate Markets
Firm B	Yes	Yes	Culture and Language
Firm C	Yes	Yes	Culture and Language
Firm D	Yes	No	Appropriate Markets
Firm E	Yes	No	Language and Regulatory Issues
Firm F	Yes	No	Appropriate Markets
Firm G	Yes	Yes	Culture and Language
Firm H	Yes	No	Appropriate Markets
Firm I	Yes	No	Appropriate Markets
Firm J	Yes	No	Appropriate Markets

Therefore, these findings agree with Bell (1995) who found similar factors among indigenous software firms and contradicts the assumptions of the Uppsala stages and process models, which maintain that firms primarily seek gradual internationalisation to psychically close countries in order to minimise psychic distance effects (Johanson and Weidersheim-Paul, 1975; Johanson and Vahlne, 1977; Welch and Luostarinen, 1988; Johanson and Vahlne, 1990; Anderson, 1993; Hadjikhani, 1997; Fletcher, 2001; Whitelock, 2002). Bell's (1995) study highlighted that Irish software firms sought overseas market entry on the basis of computer industry trends, client following strategies and sectoral targeting as opposed to forms of psychic distance. The findings appear in agreement with these assumptions, as the majority of respondent firms sought appropriate markets as basis for further market entry in comparison to cultural and language effects.

5.2 THE USE OF STRATEGIC PARTNERSHIPS

Firm A found the advice of their strategic partner invaluable when preparing for UK entry in terms of knowledge and market information.

"It was important to have that advice from (strategic partner) in developing a system for the UK...without (strategic partner) we would have had to hire someone" (Firm A).

The firm engages in active information sharing with strategic partners regarding potential customers and market developments.

"Certainly we would share with them potential customers that we might be...speaking to, we'd be quite open about that...they turn will tell us about some developments going...that might not yet be public knowledge" (Firm A).

By engaging in strategic partnering activities, it made sense for **Firm A** to hire consultants to aid **Firm A** to assist the strategic direction of the firm in international markets.

"On the back of having the (strategic partner), (that elevated) us into a different league... therefore, we needed to really examine the kind of resources that we needed and to do that it was best to get in some external help, so we hired...consultants...and ...it went from there" (Firm A).

In addition, the firm gained access to their strategic partner's network. This provided increased mechanisms and opportunity for further internationalisation activities.

"We work quite closely with a number of companies who partner with (Firm A's principal strategic partner) and they operate internationally and it might be quite possible to go with them into other international market" (Firm A).

However, **Firm B** contends that firms should not build companies on a supposition of obtaining strategic partners, as it is ultimately the responsibility of the firm to determine its own strategic direction.

"You've got to build the company on the base that if one of those deals comes along it will be an opportunistic one and you'll take the opportunity but you wouldn't build the company based in assuming it would happen. We'd have partnerships with some companies at the moment, but generally we've got to go and paddle our own canoe" (Firm B).

The firm warns of an over-reliance on strategic partnerships and maintains that a major challenge for internationalising firms is to find proactive partners who actively seek new opportunities for both firms.

"Having these lukewarm, what we call "Barney" partnerships, you know, I love you, you love me. (If) you attempt to get this partnership going, you need to go out and find the opportunities...and you bring them then to a potential partner and they find you more opportunities and that's the way it works. We've gotta go find the opportunities and we've gotta go find the customers, but it's a challenge to get one who's...a proactive one rather than a reactive one...and that's the challenge, to get the right one" (Firm B).

Nonetheless, the firm engages in informal information exchange, typically with other domestic firms.

"There is an informal network of people that know each other who ring you up and make calls...and I would be no different than that when I'm trying to find out something or (if) I know something...that might be of interest to someone else I'll give them a call, so that network is probably already there. It's an...informal one but it's very, very useful" (Firm B).

This allows **Firm B** to scrutinise the international experiences of other firms and incorporate this knowledge into the firm, particularly in terms of making and renewing international contacts and approaching overseas companies.

"You'd learn you'd talk to people and say well what was your experience of X, Y and Z. You're going in to talk to a potential customer and you know that someone else has already been in with them, and you'd ring up and say what's the story so...it's very useful" (Firm B).

Firm C maintains that strategic partners contribute to the learning function of the firm and therefore influence the long-term vision of the firm.

"In terms of learning, partners are...another face of the business and it's another front line organisation...Partners can be very adept at driving you to do new and different things because in some respect they can...play that card in a...much more collaborative way than your customer can...I think it can certainly help you to build your long term (and) longer term product strategy" (Firm C).

Strategic partners facilitate increased market presence and visibility; ultimately affecting the firm's sales and branding strategies.

"I think they can be key in certain markets...it's a way of increasing brand, it's a way of increasing market presence, it's a way of increasing sales, there's a cost of that sure, in terms of building up the margins in going the partner route, but I think for some markets it can work very well" (Firm C).

The principal functions of these partners are to bring credibility by association to the firm and to act as trade or distribution partners. Similarly, the firm argues that strategic partnering is a natural route for firms not wishing to make investment in overseas market in terms of representative status.

"We...would view two types of partners being relevant to us in the business. One is market entry or credibility partners, which is the partners that we identify that want who we want to be associated with...in terms of getting into a market in the first place...if you have two organisations working together bringing...collaborative skills sets to that market to really help you open up that market. The second type of would be trade partners or distribution partners...There are certain geographies it certainly does help your cause to be able to partner with other companies along the way because...unless you have a full time presence on the ground, it's gonna be very difficult for you to sell into that geography in a meaningful way, and where companies do not make the investment of putting their own person directly on the

ground...then there's a natural route there which is to find a local partner and work with them"
(Firm C).

Many business relationships are driven from previous business opportunities and contacts, where one firm realises the benefits of partnering regarding entering new markets or if the firm feels that partnering would result in offering a more complete solution to the end customer.

"We have certainly contacted companies...with a view to partnering...I think most partnerships...today are done on particular business opportunities of particular proposals...(and) someone realises that they can't offer all of the solution to the end client so it makes sense to hive some of it off...in many respects from companies you already know...have already done some work with and already have contacts with...Most partner relations come out of previous contacts out of networks and if having already dealt with companies before maybe having done a joint business proposal before...So our experience would be that if we have an opportunity...to bring a partner into a project (we) use someone we already know and I think that the same holds...in reverse" (Firm C).

Firm C explains that partnership agreements should contain elements of a formal relationship in terms of financial commitment. The consequence of this strategy is that both parties are committed to ensuring the relationship has a positive and mutually beneficial outcome.

"A big belief for us is if we're going to partner with someone...there has to be a billing relationship...almost like a minimum royalty agreement per year or a minimum number of...projects per year...that minimum commitment, forces you then to work at the partnership"
(Firm C).

In order for the relationship to function, it is important that both participants engage in reciprocal information sharing. Despite this, the firm is reluctant to make complete disclosure to strategic partners in order to retain competitive advantage.

"We try to be pretty transparent, we draw the line at that transparency...In some cases it might be appropriate to bring a particular partner in...because...the partner might be more successful than we would be, but that doesn't mean we share all of our information with all of our partners" (Firm C).

Emerging markets however, require different forms of partnership agreements due to issues of resource constraints. As a result, **Firm C** would prefer to control most of the initial sale into those markets.

"I think that's much more difficult to get...a very new market or an emerging market where we would certainly argue we would have to control a lot more of the sale ourselves because...it's stretching a lot more of the technologies we deliver and...it's new and emerging" (Firm C).

These partnerships are generally with non-indigenous firms, as the firm believes that more benefit is derived from partnering with foreign firms.

"There's still a little bit of an attraction of partnering with non-Irish companies because people see it as getting more leverage from that than you would with partnering with two Irish companies together" (Firm C).

Firm D engage in strategic partnerships with suppliers. Furthermore, the firm partakes in informal networking activities at seminars and conferences. The firm's long-term aim for partnership activity is to create lasting co-dependent relationships between both parties.

"The partnerships we have are all...on the supplier side...and (we) subcontract work to these companies in country. What we want to do is manage...companies that manage themselves very well" (Firm D).

"Networking...happens at these seminars that happen every two or three months...that's where we're trying to get in" (Firm D).

Firm D participates in active information sharing and resource-planning activities with partners. This creates loyalty on the part of suppliers and enhances the credibility of the firm regarding prospecting potential customers.

"I believe we are completely honest organisation...we do genuinely want our suppliers to feel that they're a part of our organisation...If we can get those people to genuinely have a loyalty and an affection towards, us they will work harder for us...work better...do a better job...Our suppliers...also (work) for our competitors...so...if you help them resource plan, you're actually helping yourself resource plan. So...if we can...work with them and build a relationship it actually helps us as well as helping them" (Firm D).

Currently, **Firm E** have initiated strategic partnership agreements with global hardware vendors. Due to the size of these organisations, the onus is on both the firm and partner to ensure the relationship is visible throughout the organisation, including overseas subsidiaries. As part of **Firm E's** long-term growth strategy, the firm envisages the instigation of similar partnerships with small local partners to compliment other activities in that overseas market.

"We haven't got partners in every country that we operate in...what we've got is a global partner, like IBM or Hewlett Packard and they tend to have local organisations, but, they may have...presence in certain countries and they don't know anything about us, so we and they have

to work to make sure that everybody knows us, because they're like separate units in different countries even though they're the same brand name...As regards local...smaller companies...we haven't bothered with that yet, but...we'll work that way eventually, we'll find specialists who'll work with us in each of the countries" (Firm E).

The firm observes that partnerships are an important learning experience for the firm, as regards internal operations and selling cycles, and in enhancing firm credibility.

"We've learned from the experience...They are an extra pair of eyes looking in at (Firm E)...They tell you things about yourself that you may not want to hear but, you've got to...correct them...they...point out the ways that...we can make it easier...It's good to have a third party...looking in at you...and helping you on that side and also the commercials, a company like IBM tends to be very tough on commercials so you can learn...an awful lot" (Firm E).

The firm and strategic partner partake in ongoing exchanges vis-à-vis market information, competitors and joint market targeting campaigns.

"We certainly share information about the market and who's out there, what's happening...we can co-market it together...so we can both invest funds in campaigns...together" (Firm E).

Nonetheless, **Firm E** is cautious of partnerships where larger market players can exert undue influence over smaller firms, resulting in unfair workload distribution.

"Partnerships are only as good as the revenue that can be derived from each...Companies...when they're under pressure tend to be very greedy and try to take all the money so initially they're trying to shaft you, and then eventually when they can't get the deal without you they tend to bring you in...If there's too much business and if they're...cherry picking the bits they want, then you'll find the partnership is even more lucrative and they'll be pushing things at you, maybe the bad things, so you've to be careful then that you don't end up with all the hard work and give them all the margin" (Firm E).

In spite of this, the firm believes that if a good relationship underpins the partnership then the outcome should be favourable for both parties.

"At the end of the day the partnerships are down to the relationships that you've got with people. The companies are behind the scenes...it's the people working together and if that's a good team then the partnership will be good" (Firm E).

Firm F participates in strategic partnering to capitalise on potential synergies between participants. They find that partnerships bring confidence to the firm, as both partners appear larger, well funded and robust when seeking entry to MNEs.

"If we see a fit and they see a fit for a common opportunity, then we can go together...We would partner with people...because they have a product which is very much a fit with one of our products and we sell jointly...The two of us together look bigger...and depending on what the customer wants...they may feel a bit more confidence when they see a combined balance sheet and...(we) look healthier...together" (Firm F).

Firm F undertakes strategic partnerships based on available market opportunity. Similar to **Firm E**, it believes that good interpersonal relationships should underpin strategic partnerships.

"It would really be on a case by case basis...the partnership may only last for six months or a year because the opportunities may arise and disappear...It's very much...how we interact...if we get along well...then it can work very well" (Firm F).

Potential partners seeming an appropriate technical match may not prove a fitting strategic partner if interpersonal difficulties are present. As such, the firm seeks strategic partners based on appropriate market opportunity and strong interpersonal relationships.

"We've tried to partner with companies and...on paper it looks like a fit, but...the people...didn't see eye to eye so we...didn't progress with that. Whereas...maybe we weren't quite 100% technical fit but we certainly felt that the partner was motivated enough or hungry enough for the business and that we could certainly do a lot better and get more traction in the market place, with this partner than with...another partner" (Firm F).

Firm F seeks strategic partners based on evaluation of virtues such as viability, credibility and approved political associations to facilitate ease of foreign market entry.

"We'd watch out for things (like)...were they a...viable organisation, had they...many markets (and) the right political connections...at the right levels" (Firm F).

The firm contends that strategic partnering should involve technical information sharing and resource provision to satisfy training and assistance requirements of both parties.

"Total technical sharing, depending on the partner and what we're doing of course, so we would give them total access and we would put people on site to help them, and train them...so we're fairly, rigorous and fairly open" (Firm F).

Firm F also comments on the tendency for Irish companies to engage in strategic partnerships with non-indigenous firms, due to limited domestic market size and the fact that partnering with foreign as opposed to Irish companies is an easier proposition.

"Irish companies...are very bad...(at)...partnering with each other because we're all...chasing the same small band of customers...and there's far too much competition and I think Irish companies...find it easier to go and partner with someone in Italy or the Czech Republic than they do with someone down the road" (Firm F).

Firm G had developed partnership agreements with several large market players to advance international expansion. Unfortunately, these partnerships did not come to fruition due to a downturn in the mobile payments sector that negatively impacted upon the firm's overseas expansion.

"We never got to develop the traction where we...you know made other channels more important like using the likes of (strategic partners) and so on. They did bring us opportunities as well, we have written...co-marketing agreements with (strategic partners) and a number of other companies as well" (Firm G).

Firm H use strategic partners as entry mechanisms into overseas firms through the pursuit of partners with appropriate knowledge of overseas target firms. Such a strategy facilitates a quicker and more efficient sales cycle and the creation of sustainable relationships between firms.

"We would use partners to get us to a willing buyer...They've already sold to people that we want to sell to, they already know the people and what the budgets are...and they'll...bring you to these guys and what would typically happen is that out of the model (is), our orders will increase, we would ramp down building the implementation service of the product and they would take that on" (Firm H).

The firm believes that strategic relationships should bring reciprocal value to each party. The firm gains accelerated entry, and partners derive benefit from offering implementation and other services to both the firm and overseas client. Both strategic partners and the firm derive associated credibility from the overseas firm.

"We both go in, the partners gets the value of bringing something interesting to the client...we get the value of meeting the decision maker...we've a much more efficient sales cycle, the partner may get services. They may...just introduce us...(and)...we may give them a slice of the action of the licence of the product" (Firm H).

Firm H also commented on a possible future strategy of persuading strategic partners to implement the firm's product within their own organisation. When successful, this brings increased commitment to the partnership and provides important reference sites overseas.

"We would hope that as we mature with the product and with the amount of clients that we have, that we can get one or two partners...to actually take the product and implement it themselves" (Firm H).

In addition, this firm anticipates the implementation of further strategic partnerships along the firm's value chain, to include collaboration with distribution partners.

"What we'd like to do... is get to a sell through model, so that the software could be put through a distribution channel...and we can do the distribution agreements with people" (Firm H).

Firm H also undertakes informal networking with strategic partners and former clients, in order to access tactical contact information to pave the way for an approach to foreign offices of subsidiaries of existing clients. This is a valuable means of increasing the firm's international profile.

"We network with (partners) all the time but, it's...more targeted...we have particular types of methods that we use to do that...but it's, seldom the type of networking that you do in the US. In the US, you do networking for networking sake, whereas we go in and meet with (customer) in Paris, to tell them what we're doing in London and find out the name of the people that we really need to talk to...if we're trying to do something in Paris" (Firm H).

The firm also finds informal networking activities useful, in terms of practical and commonplace business information and activities.

"I can and do ring up (CEOs) and gangs of other CEOs that we deal with...software companies need to create that opportunity (so) you can actually go in and it's just CEOs and you close the door and you talk to each other about shareholdering boards, lawyers, anything...that's probably the most practical help...we can offer each other" (Firm H).

Firm I acknowledges that strategic partnering and informal networking is part and parcel of the software industry, particularly amongst indigenous firms. In fact, since strategic partnering is considered commonplace within the software industry, the firm expresses concern at indigenous firms who do not engage in such activities.

"It's (strategic partnering) a very common feature of...software, everyone has alliances and partners and...it comes about because practically all business applications need a degree of integration...and it's very difficult for one supplier to do it all. Rather than constantly fighting each other...if you join together you can kill more, (rather) than everybody trying to do it on their own and everyone trying to fight each other...it's just a feature and basically if you're not doing it you're probably in trouble, you're either extremely big and you can afford to tell everyone to take a hike...or else you're stupid" (Firm I).

Similarly, **Firm I** highlights the importance of maintaining the interpersonal relationship underpinning strategic partnering activities.

"We've a number of them that work...we look after them, you socialise a bit with your counterparties, you bump into to them every so often...at tradeshows and so on and you keep the relationship good" (Firm I).

Finally, **Firm J** also participate in strategic partnering. Despite having non-exclusive contractual arrangements with partners, these relationships are of a more informal nature in comparison to other respondent firms. Moreover, the firm believes that such an approach promotes client confidence and encourages trust in the relationship.

"They (strategic partnerships) are pretty informal, at the end of the business you shouldn't have a twenty page business contract or (they) would run away because they don't want to get involved. We have a two page agreement...which was very simple and...it doesn't require them have lawyers look at it...it's a no brainer for them. It doesn't tie to them to us very tightly so that's the kind of business we're into, you couldn't really nail people to the cross in terms of, you have to stay with us for twenty years and you have to give us all your (business)" (Firm J).

However, due to the nature of **Firm J's** service offering, and perhaps due to overseas cultural differences, many firms are initially perplexed as to the nature of the relationship between the parties. This provides an additional challenge for the firm in order to maintain the relationship.

"The relationship is kind of confused because people are not used to dotcom, so we still have this, oh he's my distributor. In ordinary cases the firm would look at...an international distributor and go, great look after him, but in our case, it's kind of sort of semi-parasitic plus semi-distribution plus...we're equals" (Firm J).

5.2.1 Synopsis

Chetty and Wilson (2003) suggest that collaboration activities with competitors, or other firms in the same industry, is an effective method of gaining presence in overseas markets, as strategic partnering heralds such benefits of outsourcing, competing in unfamiliar markets and risk spreading activities (Elmuti and Kathawala, 2001). As presented in Table 5.2.1, all respondent firms engaged in some form of strategic partnering activities, which generally involved collaboration with fellow industry players, global hardware vendors or local firms as opposed to customers. These form of partnerships serve to enhance firm credibility, provide entry mechanisms into foreign markets and provide vital local market knowledge (Inkpen and Beamish, 1997). Additionally, it appears that there was considerable diversity among respondent firms as to classifications of strategic partnership. According to García-Canal et al (2002)

strategic partnering may consist of one key global alliance, multiple global alliances and competence-building alliances. However, respondent firms seemed to display characteristics of all forms of these strategic partnering activities, with the most common being multiple global alliances and competence building alliances as opposed to one key global alliance, with a mixture of technological and marketing partnerships being undertaken.

Strategic partnering activities allowed respondent firms to minimise internationalisation barriers, therefore, supporting the suppositions of Karagozoglu and Lindell (1998), Lovelock (1999), Zimmerman (1999), Lu and Beamish (2001) and Fillis (2004), who state that the use of strategic partnerships may reduce internationalisation barriers in overseas markets and serve as mechanisms to increase firm strength in those markets (Lee et al., 2000). Further to this, Bell (1995) found that Irish software firms engage in strategic partnering and collaboration activities. Coviello and Munro (1995; 1997) and Kauffman (1995) maintain that formal or informal relationships with other firms is viewed as an effective mechanism for increasing marketing capabilities in existing international markets or as mechanisms to gain entry into new markets. In the case of respondent firms, various partnerships were initiated in order to take advantage of firm synergy, reputation and credibility advantages. These partnerships also served as an important foreign market entry mechanisms, allowing firms to bypass traditional entry channels in order to accelerate firm sales cycles and reduce risk in overseas markets, which finds support for Elmuti and Kathawala (2001). Additionally, Moen (2003) maintains that strategic partnering activities are an important mechanism for increasing firm competencies and resource base, as strategic partnering facilitate firms to overcome these resource constraints by sharing intangible assets (Lee et al., 2000; Lu and

Beamish, 2001). The findings support these points, as most respondent firms sought to engage in active information sharing and joint marketing activities, involved strategic partners in market entry and used them as mechanisms to enhance reputation; which brought increased confidence and further overseas market credibility. However, Nordberg et al. (1996) note that some strategic partnering relationships require incentives in order for efficient knowledge transfer to take place between firms. The case of Firm C highlights this point, as it believes that billing relationships should underpin its strategic partnering activities.

Table 5.2.1 Strategic Partnering Activities of Respondent Firms

Respondent	Engage in Strategic Partnering	Opinion Regarding Strategic Partners
Firm A	Yes	Facilitate market entry Enhance credibility and reputation Influence the firm's strategic direction
Firm B	Yes	Key asset to the firm Method of reselling technology A firm cannot be built on the assumption that the partnership will work out
Firm C	Yes	Key asset to the firm Method of increasing brand Method of increasing sales Enhance firm credibility Important to formalise the relationship
Firm D	Yes	Active information sharing Resource planning Create loyalty Enhance firm reputation and credibility
Firm E	Yes	Foreign market entry mechanisms Facilitate the learning function of the firm Enhance credibility and reputation
Firm F	Yes	Formed on the basis of market opportunity Underpinned by personal relationships Enhance firm credibility The firm appears larger Enhances firm confidence
Firm G	Yes	Mechanism for further internationalisation activity
Firm H	Yes	Foreign market entry Mechanisms Eventual collaboration along entire supply chain Underpinned by personal relationships
Firm I	Yes	Important facet of the indigenous software industry Underpinned by personal relationships
Firm J	Yes	Promote customer trust Promote customer confidence

Despite beliefs in the extant literature regarding the management of strategic partnership activities; in terms of loss of flexibility, issues of trust and control (e.g. Frankel et al., 1996; Drago, 1997; Elmuti and Kathawala, 2001; Parkhe, 2001; Pietras and Stromer, 2001), the feedback from respondent firms regarding partnering activities seemed wholly positive and beneficial to both parties. This could be attributed to the fact that the majority of respondent firms were aware of the need to maintain the interpersonal relationships underpinning the partnership process. However, in the case of Irish indigenous software firms, the need to gain local insight and engage in strategic partnering activities overseas may be an immediate one, which appears to explain the high levels of commitment to the process displayed by respondent firms. Nonetheless, a strategic fit between parties is also of utmost importance as strategic partnering for its own sake as opposed to seeking an appropriate fit between firms proved an unsuccessful strategy.

Consequently, most of the extant literature pertaining to the advantages of strategic partnering was supported, as respondent firms demonstrated their use of strategic partnering activities as a facilitator throughout their internationalisation process. Indeed, in the case of most respondent firms, strategic partnering activities commenced upon or shortly after, the inception of the firm. In the case of those firms who did not internationalise from inception, the initiation of strategic partnerships appeared to coincide with internationalisation activities, suggesting that strategic partnering activities are an integral part of the internationalisation process of Irish indigenous software firms. However, this may be also due to the high degree of internationalisation within the market (Chetty and Wilson, 2003) and the propensity of high technology-

based firms (Coviello and Munro, 1995; Jones, 1999; Spence, 2004) and Irish indigenous software firms to engage in strategic partnerships in foreign markets.

5.3 BARRIERS AND CHALLENGES TO THE INTERNATIONALISATION PROCESS

Section 2.3 highlighted that firms may be constrained by barriers and challenges which may severely hamper the internationalisation process. These challenges may impinge upon the firms' entry decisions and overseas market considerations, as well as affect firm's long-term internationalisation strategy. This findings section will present respondent firms' experience with regard to the barriers and challenges faced throughout the internationalisation process.

Firm A discovered that entering overseas markets placed huge financial constraints on the firm; including the establishment, development and servicing of an overseas office.

"In terms of the challenges along the way...I think...there are certain things that generally involve incurring a bigger cost, it's like a set change and you're not really going to recover that for some time and one of those would be...setting up the office in Birmingham...Suddenly you're committing yourself to incurring a hundred thousand pounds of overhead that wasn't there before" (Firm A).

In addition, engaging in strategic partnerships resulted in the commitment of increased resources towards internationalisation to ensure that the collaboration was successful.

"We had to engage a lot of extra programmers purely on the basis that the contract with (strategic partner) was going to work out...we have quadrupled the amount of developers that we had...and that's a big commitment to make and you've got to have faith in what you're doing to...do that" (Firm A).

The firm encountered overseas entry barriers in terms of market regulation. However, steps taken to overcome these issues included product modification and a strategic

future internationalisation strategy based on entry to countries with homogenous pharmacy regulations.

"There are issues (in the EU), indeed that's why the commonwealth countries...have an attraction, because of the common kind of legal areas that exist, but our system is designed very much to deal with regulation" (Firm A).

Firm A believes that the firm's size brings about advantages in terms of flexibility and responsiveness and disadvantages concerning customer prospecting and the impression that as a small company, the firm would find itself unable to respond to the needs of larger customers in addition to the needs of its strategic partner.

"I think we are more responsive and flexible...and... its hampered us...because...there's been a couple of occasions where we've been talking to potential clients in the UK who have been put off by the fact that we are small and because we've got (strategic partner) they...think, well their hands are full...we prefer not to take the risk, that this small company can't actually deal with us adequately or deliver what we want effectively" (Firm A).

However, in spite of this the firm is still concerned about customers' perception of their size. To combat this, the firm derived several tactics to deal with this problem, including presenting comparative statistics and collaboration with larger system integrators to benefit from size and scale advantages.

"One is to just to say to them that we're not that small at all bigger than they think...by...pointing put comparative numbers of people actually involved in this business...another possibility is...(to) do a deal with a systems integrator and get them to...come along with you and really you're trading on their name as it were" (Firm A).

Firm A envisage similar challenges in the future, including market specific entry barriers and the extent to which the firm will have to undertake localisation activities for foreign markets.

"The challenges for the future...are going to be similar because it will relate to the territory that we go into and...it's to do with the deal that we do in each of those territories...the investment then (required) to make in the software...to localise it, I think that they will be the big challenges" (Firm A).

Firm B, similar to other respondent firms, commented that the firm's size and scale acted as an overseas entry barrier when prospecting US MNEs.

"One of the barriers that you would come up against in certain circumstances is our size as a company when you're trying to deal with a large US organisation" (Firm B).

Further to this, while some UK customers to take advantage of the flexibility and innovativeness of smaller companies, other customers tend to look at larger firms on the assumption that size is equal to longevity and the proposition entails less risk. Smaller firms tend to engage in strategic partnering to supplement size constraints.

"Certain companies...will work with smaller companies because you get more innovative technology...attentive...support and service, than you might with larger companies and they'll take those risks, while other companies will just go the low risk route and just go with IBM or someone like that" (Firm B).

Nevertheless, **Firm B** deems the possession of small firm features advantageous in respect of firm flexibility and responsiveness to customer needs.

"We can change very quickly...with the market and...market requirements...We can move, we can turn the Firm Around very quickly...we can turn our website around very quickly to target specific areas...(and) the larger you get it's more difficult to make those decisions" (Firm B).

It also discovered that not being American as a corporate entity presented an entry barrier into the US market.

"There's this campaign in America called "Buy American"...that's a hindrance" (Firm B).

Firm C found that location and competition issues presented challenges to the firm in dealing with international markets.

"If you are selling, even to the UK market...that customer has to believe that you live only a hundred yards down the road from them, because your competitors will be" (Firm C).

The implementation of appropriate customer relationship management systems and reinforcing the culture of the firm, allows **Firm C** effectively serve customers, regardless of location.

"You need to be as reactive and responsive to your customer in Reading...as you are to a customer three doors down...that certainly...needs to be in the culture of your company...it really doesn't matter where they (customers) are, you've got to respond to them in the same way...I think you've got to get over that hurdle, if it makes sense to go to the customer, you've got to go...and that shouldn't be determined as to whether you're walking across (the road) or whether you're jumping on a flight to the UK" (Firm C).

Cultural differences pertaining to overseas markets acted as entry barriers for **Firm C**. However, the firm contends that clear selling propositions, targeted contacts and strategic networking activities somewhat alleviate these barriers.

"Buying habits and selling habits are...different in other European countries to what they are in Ireland because of the sheer size and scale of those markets...once you move to that you need to be very refined about what you're selling, you need to have your proposition absolutely clear and you need to be...prepared either yourself or through a third party to build up that list of contacts and databases and...make contacts into that organisations" (Firm C).

Strategic partnering is a vital component of the firm's internationalisation strategy, particularly when faced with scaling issues when dealing with larger companies overseas.

"Where you are looking to win large projects it certainly makes sense to partner with other companies...A multi-million...Euro project investment...will not be won by a company of twenty five people on a standalone basis, it will generally be won by a company of twenty five people partnering with an organisation of many more people where each company delivers a specific piece of the project as part of their overall five to ten million pound build" (Firm C).

Firm C asserts that internationalisation commitment, reputation and ability to demonstrate profitability and longevity, go some way in persuading overseas customers to make investments in the firm.

"As long as your balance sheet is strong and robust...you can demonstrate profitability and you can demonstrate that you're here for the long haul and you that you won't...out of business in six months time or twelve months time and that the investment that the customer is making that you can deliver on it" (Firm C).

Firm D encountered a variety of challenges at inception and throughout the internationalisation process. These challenges included finance, finding appropriate office accommodation, lack of government support and dealing with large, well-funded international competitors.

"All sorts of challenges, finance, office...we...(were) out of our location...the lease had run out...it was the peak boom time and... it's a nightmare...Enterprise Ireland was a pain in the arse, we couldn't get any money out of them...By the time you actually get money out of them you're dead, so with seed capital it's way too late...Price jumping, we're still facing it. Some of our major competitors have never made a penny since they set up. They floated on huge sums of money...we compete with them and they price jump" (Firm D).

The firm also experienced human resource, and shareholder issues.

"Keeping...hiring staff, when you're a small company, you're competing with some of the major companies out there...what can you offer that they can't offer...We went through the whole phase of the Dotcom thing where people took massive shareholding out of the company, and we had to satisfy that" (Firm D).

The scale and size of the firm also presented challenges to **Firm D**, as did the firm's rapid internationalisation and growth activities, which resulted in constraints of firm resources. Conversely, increased market presence wielded a positive influence on the firm's reputation and credibility and served as a distinct advantage in terms of further international growth.

"It was more of a challenge early on when...we didn't have as good a client base and we didn't necessarily have the track record, financial and otherwise, to try...break into...big...firms now we go to (large MNEs) and...they know us...we're well known in the community so that's a huge benefit now, which wasn't the case then" (Firm D).

"Last year we grew...grew far greater than we ever thought we would and...that put strain on us, we had to open up a number of new departments here just to control that" (Firm D).

Similar to **Firm B**, the firm encountered US market entry challenges due to the firm's foreignness in the US and firm's size when prospecting international customers.

"The fact that we are an Irish company...selling into major clients in the States and we're, competing with huge, very large US clients...that can be difficult at times" (Firm D).

In addition, the firm faced the challenge of customer inertia, due to the reluctance on the part of potential customers to switch from using ineffectual suppliers to employing the dedicated service of **Firm D**.

"The bigger problem is...trying to knock out...the incumbent suppliers...because they may not be doing a fabulous service...(but) it takes a lot of guts for these purchasing managers to say...okay we'll work with these...people for six years we'll give them four million pounds worth of business, now if I kick them out...I'm taking a big risk and that's...more our challenge on a day to day basis" (Firm D).

In this way, **Firm D** discovered that in order to gain competitive advantage, it was important to differentiate the firm's service offering from competitors and devised integrated services for customers to bolster customer loyalty while simultaneously attempting to ensure firm longevity.

"In differentiating our service from other people, we've set up a number of things...we...offer a service to clients, whereby we can test their software on multiple environments...we've got a couple of clients that really need that service, but the infrastructure, the cost of those servers and the IT services, the training and the people we need to do that is absolutely vast" (Firm D).

Notwithstanding the above challenges, **Firm D** believes that aggressive market strategies, coupled with risk-taking entrepreneurial behaviour has allowed the firm overcome some obstacles in the international competition arena.

"It's hugely stressful, huge risks, in that, you're betting the company every month on...something you're trying to weigh it up...we could never be in a position of being complacent and sitting still, if we'd set up...and had not being aggressive, spending every penny we had, and selling into the States, we would not... be here, so we had to take...risks" (Firm D).

Firm E cited internationalisation challenges in terms of foreign travel cost, human resource concerns and finance.

"Cost of travel, it's quite expensive...that'd be a huge one, having to put down local offices in foreign countries is an expensive thing too, hiring people abroad is expensive...those are the kind of challenges...it's expensive running an overseas organisation" (Firm E).

Firm E also mentioned company size and scale as a significant challenge, regarding both foreign and domestic markets. This domestic anomaly is partly attributable to domestic firms seeking to internalise software development as opposed to outsourcing activities to a third party firm. Conversely, this factor provided a greater impetus for the firm to dedicate increased resources toward internationalisation.

"In Ireland...we're big...but that doesn't seem to count in terms of us winning business. A lot of the insurance companies are building their own software and the banks...spend millions...developing their own software with consultancies, the biggest competitors we have would be consultancies who want to build software on a services basis...and that...tends to cost a lot of money but...it seems to be...a cultural thing that the IT managers want to build rather than buy...so we have to work hard abroad to win business" (Firm E).

Overseas markets presented similar challenges because of **Firm E**' size. Nonetheless, collaboration activities with large and reputable strategic partners facilitated ease of access into overseas MNEs.

"In terms of trying to balance things in our favour then we'd work with a partner. A big gun like IBM can help us a lot in making us look bigger and representing us to the customer...If the customer has any fear about doing business with a company of our size, we'll hide behind IBM and let them do all the contracts and then we'll do our business with IBM" (Firm E).

In 2002, the firm faced its biggest challenge when the firm's overseas funding mechanisms collapsed. The firm was obliged to undertake a period of restructuring and reflection of current business strategy. The fallout from the episode left the firm in a

challenging financial position. Nonetheless, **Firm E** strengthened internationalisation activities and appreciated lessons learned regarding human resource policies and underestimating the risk involved in seeking overseas markets.

"We took money in...2001...that was the first time we ever took in investment and we went abroad...2002 was a very difficult year because we lost a project with (funding partner) as it happened... we didn't have the work, so that caused us to do restructuring...We've learned that...you have to cover yourself in terms of hiring too many people too quickly for...projects...you need to be very careful about the risk-side, that the customer could cancel the contract" (Firm E).

Firm F encountered such issues as lack of finance and scale, in comparison to larger, well-funded international competitors.

"It is difficult, because...our main competitors would be German and Israeli...they would have maybe twelve to fourteen hundred people...We raised some VC last year for a product development, but...compared to our competitors who would have...a few hundred million behind them, we're very...small and...this is one of the problems with the Irish software industry that most of the companies are very small and under capitalised" (Firm F).

The firm also discovered that differing cultural practices, business methods and unexpected political challenges resulted in the creation of high entry barriers.

"There are cultural barriers...language...knowledge of the local environment...the political situation; I mean you don't expect that. Maybe naively, I was surprised at the amount of...(corruption) in the Middle East and North Africa... it's different ways of doing business...in certain...cultures that just make things very difficult when you're an Irish Firm And come at it from a Northern European...approach, whereas, other countries may do business very...differently" (Firm F).

"We have an attitude that you do the work and get paid sixty days afterwards, in certain territories and countries, that just isn't the culture and when you go not expecting that, that can be a bit of a shock" (Firm F).

Firm G related finance and the influence of venture capitalists as foremost challenges to the internationalisation process of the firm. After obtaining further finance, the firm was obliged to employ a foreign CEO as part of the agreement. Unfortunately, this resulted in lack of foreign sales and a restructuring period within the firm. The firm's founder was reinstated as CEO with the difficult task of bringing the firm back to basics to capitalise on early successes achieved previously.

"It was a condition of investment, which is not unusual in an Irish company, in particular Irish VC contexts... the CEO...who was recruited...having spent some time with the company, didn't really work out that well, so he was made redundant... and I've been CEO again" (Firm G).

Firm H experienced challenges pertaining to the firm's scale and size, but contend that advantages are also inherent in being smaller than competitors and customers in terms of innovation and flexibility.

"The way that the banks look at it...is they want to work with companies that aren't going to run out of business, they need companies like ours because we're the ones doing the innovation...Tactically the large organisations aren't dealing in innovation...and...they know that they can exert a huge amount of more pressure on a smaller company than they can on a larger company" (Firm H).

Firm H cited human resource issues as the firm's most prevalent challenge while operating internationally. In particular, the firm found difficulty in employing staff who embraced the firm's culture and were proactive in representing the firm overseas.

"Something that you probably don't factor into your business plan is how much you actually need to trust people. It's amazing the amount of people that come on board, spend a lot of money on your behalf...(and) happily make all the wrong decisions and happily let you pay all the bills... we had a guy heading up our UK operations and four of his people were going over to service a site...in Chicago and...he put them all on business class...it cost us twenty five grand sterling to send them over for the weekend and...(he) sent them early...(and) the company was loss making at the time and was in crisis" (Firm H).

In several cases, the firm mentioned feeling betrayed by staff in terms of non-recognition and appreciation of the firm's difficult financial position during the restructuring period and regarding ignorance of cultural differences overseas.

"The biggest issue was getting to the right quality of people to staff those organisations, integrate them with our organisation and getting them up so they could sell and adopt our model...Issues with staff were...trust and management...Culturally...what...some people like, other people don't...One guy who headed up one part of our organisation... pissed off every client he met and the main reason was he lectured them...and it didn't do us any favours...and the clients didn't want him telling them how to run and the business...(but) in some other regions, that's exactly what they want" (Firm H).

In 2000, the firm faced restructuring and seeking an alternative market to aid firm recovery. The firm believes that a responsive team and a strong determination and belief in the basics of the business facilitated the firm's recovery.

"The markets collapsed, the customer demand collapsed...we didn't raise the eighty million...to fund the rest of growth and we were left with two hundred and fifty people on the payroll...and not only did we have to deal with the restructuring we needed...we also had to deal with

the...repositioning the business...it...had to be, did we believe in the fundamentals...and...in our paradigm of the software and was it just that the initial market we tested...worked well for a while. But...everything collapsed and we weren't the first in the market, (but) we were probably the first to react to it" (Firm H).

Firm I stated that the firm's size and scale offer advantages for flexibility and innovation and disadvantages regarding obtaining large customers when operating internationally.

"There is an advantage...we can turn ourselves around...quickly...and smaller companies are more efficient users of whatever resource is available to them because they are that bit more flexible, they are...closer to the action, they tend to make better calls because of...that very fact" (Firm I).

Market forces, the changing pace of technology and the impact of competitors were considered the biggest challenges when engaging in internationalisation.

"Being a software company, the biggest...challenge you have is that the...fundamental characteristics of the market segment you're selling into changes very quickly" (Firm I).

"I think I mean the number one...danger...for us is an inversion...(in)...the technology or theoretically a change in legislation which would fundamentally alter...the way international trade is conducted" (Firm I).

"Competitors taking market share from you...there are ways that you can respond to that, you can drop your prices...markets are big, there's always another angle that you can attack it from" (Firm I).

Firm J found cultural diversity in international markets a major challenge during internationalisation, as customers failed to grasp the concept of the service offered by the firm.

"Culture, language, getting people to understand that you weren't out there to rip them off because you are selling them a new concept...it was just get him to understand that it was just get him to understand that all we are is technology and marketing, we are not brand" (Firm J).

Language issues created problems regarding quality control and misinterpretation issues.

"You are divorced from your product when you get into language issues, in other words we could have a site that's in Chinese and I don't speak Chinese so that makes it possible for the person who makes the translation to say that they are selling shoes...there's a risk there because you can't know every thing in every language" (Firm J).

5.3.1 Synopsis

Bell's (1997) research found that Irish software firms face barriers in the form of finance related barriers, "red tape", product concerns regarding pricing and delivery, payment delays and currency fluctuation. Challenges to the internationalisation process cited by respondent firms consisted of cultural issues, overseas competition, human resource concerns, the changing pace of technology, market forces and firm size and scale (as seen in Table 5.3.1) as opposed to those barriers highlighted by Bell (1997). However, support was found in relation to Bell's (1997) assertion that internationalising software firms face barriers pertaining to export finance. In addition, the general literature on export barriers was supported, which posits that internationalising firms may face issues and barriers such as knowledge deficiencies, inert managerial commitment (Leonidou, 1995; Fillis, 2000; Suárez-Ortega, 2003), cultural differences, shifting consumer expectations (Bilkey, 1978; Fletcher, 2001), foreign competition (Winstead and Patterson, 1998), partnering deficiencies (Bilkey, 1978; Karagozoglu and Lindell, 1998; Winstead and Patterson, 1998), protectionist policies and other forms of restrictions, (Dahringer, 1991).

On the other hand, the researcher did not find support for the assumption that barriers affect managerial commitment to internationalisation activities, as proposed by Leonidou (1995), Fillis (2000) and Suárez-Ortega (2003), as cultural awareness of overseas markets displayed by all respondent firms seems indicative of managerial commitment to the internationalisation process, perhaps due to the fact that most respondent firms had a mindset to seek international markets from inception and were aware of potential cultural barriers in overseas markets.

Unique service characteristics may also serve to challenge international expansion activities (Nicoulaud, 1989; Ekeledo and Sivakumar, 1998; Samiee, 1999; Zimmerman, 1999). As previously noted in section 2.2.6, software contains characteristics of intangibility, heterogeneity, separability and “storability” (Ekeledo and Sivakumar, 1998), implying that inseparability and perishability are less influential on internationalising software firms than other forms of internationally traded service. Samiee (1999) maintains that due to the intangibility of many internationally traded services, cultural differences in overseas markets are likely. These differences pertain to language (Leonidou, 2000; Suárez-Ortega, 2003), government policies (Lovelock, 1999) and other cultural factors specific to that market (Clark and Rajaratnam, 1999). However, the majority of respondents offer software products as opposed to services, and levels of interaction between the firms and their customers did not present themselves as internationalisation barriers in the research findings. However, issues of intangibility, pertaining to overseas cultural differences as opposed to interactional issues, were prevalent among respondent firms, particularly those who provide a software service offering (Firm D, Firm J).

Consequently, it seems that respondent firms were more susceptible to non-tariff barriers than tariff barriers in overseas markets. The most consistent barrier among respondent firms was that of firm size and scale in comparison to foreign competition. This issue of firm size and scale in comparison to international competitors appears to be culturally based and directly related to firms’ perception of overseas markets and the fear that in order to compete on an international stage, the firms must be of comparable size with international competitors. Other challenges include domestic funding mechanisms, market forces, market entry barriers, human resource issues and lack of

domestic government support also appeared prevalent and largely support the opinions of key informant interviews and industry data literature in chapter three. Nonetheless, the use of strategic partnership activities (as indicated in section 5.2) appeared to lessen the effect of these barriers on respondent firms.

Table 5.3.1 Principal Barriers and Challenges to the Internationalisation Process of Respondent Firms

Respondent	Principal Barriers and Challenges
Firm A	Overseas market entry Firm size and scale Strategic partnering commitments
Firm B	Overseas cultural issues Firm size and scale Not being a US entity
Firm C	Overseas cultural issues International competition Firm location
Firm D	Finance Lack of government support International competition Differentiating the firm's service Human resource and shareholder issues Customer inertia Firm size and scale Not being a US entity
Firm E	Finance International competition Size and scale Restructuring the firm subsequent to failing to secure overseas finance
Firm F	Finance Size and scale Overseas cultural issues International competition
Firm G	Finance Venture capital influences Restructuring the firm, subsequent to market slowdown
Firm H	Firm size and scale Human resource issues Restructuring the firm, subsequent to market slowdown
Firm I	Firm size and scale International competition Changing pace of technology
Firm J	Overseas cultural issues

5.4 FUTURE CHALLENGES TO THE INTERNATIONALISATION PROCESS

Firm A believe that both pharmacy and indigenous software markets are facing a consolidation period due to market regulation within healthcare and due to lack of financing within the entire software market.

"There's already a slimming down effect of competitors...In the UK market there's a big shakeout going to occur in the next two years...currently there's about seven players and I'd say that will consolidate down to five... and we'd be determined to be one of those...unless we're acquired by someone...The sector as a whole in five years...I'd say the same pattern...will exist" (Firm A).

Firm B contends that the Irish indigenous software market is under threat from emerging software economies such as India, China and Israel and Eastern Europe and as such, deems it important that Irish software firms consider synergy and outsourcing opportunities with these countries as opposed to engaging in direct competition.

"I think that there's challenges from India Israel and China and I think that where we have to be in Ireland is...up the value chain where we're up at the...thought leader level ...I think that they're countries that we can work with rather than against...if we try to compete with India and China, we'll lose, so we don't try and compete, we try to go up the value chain and work with them, do development and outsource to those countries, which we do at the moment...I think the sector as a whole in five years time will be will be seriously changed...China will be...a serious power and they would be even a bigger superpower than the US is at the moment...I think Eastern Europe will be probably...the biggest competitive force to Ireland...not China or India" (Firm B).

Firm B advises that indigenous firms should concentrate on niche business-to-business markets in order to exploit innovation and flexibility characteristics inherent within the Irish indigenous software sector.

"I think...the steps you take is, know your market...very well and have really niche products for those markets that you actually control value in the product, that you're selling business value, it's not technology value, so... the next five years is... about using technology for business to get business advantage and that your products can actually give them the business advantage. I think the Irish can do that more than anyone can, and we'll continue to do it that way, I think more so than maybe some of the other countries that we may compete with" (Firm B).

The firm has formed successful strategic relationships with Indian software firms and has experienced little difficulty regarding cultural differences.

"It's not a problem, we outsource to India at the moment...and we do have a good relationship, we get on great. India is a former English colony, you'd be surprised how culturally similar they are to us" (Firm B).

Firm C expressed concern at the number of indigenous firms operating below two million euro on an annual basis. Therefore, there remains a challenge for well-established seasoned firms to further capitalise on available and potential market opportunity in order to achieve increased and sustainable revenue.

"There's a real challenge out there for a sufficient number of Irish companies to achieve scale...if you look at the threshold of companies operating under two million per annum as a percentage of total Irish software companies...I think...the challenge is firmly on existing companies to turn themselves into organisations that can deliver five to ten million revenues annually... there is an opportunity for a number of Irish companies who have been in business for the last five to ten years who have reasonable level of maturity in terms of their market strategy, in their products and their customer base to actually go and...build themselves into five to ten million companies. But if the failure rate in that is high, that's got to be a worry" (Firm C).

The firm also cites India, China and Israel as significant threats to the Irish software market, despite the differing inherent characteristics of each country.

"I think that all of those markets have different dynamics in terms of what they're offering...Israel is offering usually products that are high in IPR and...coming out of a military background. It's a very different dynamic to India which is about writing software cheaply...which is...very different again to the Chinese market" (Firm C).

Firm D, similar to other respondent firms, stated that the indigenous Irish software sector requires a certain amount of consolidation activity and provision of increased and improved funding mechanisms, to facilitate international market strategies. Failing that, smaller under-financed software firms should consider merger and acquisition activities with US firms seeking to bring inward FDI to Ireland.

"There should be a certain amount of consolidation...(but) having a company that's worth two million as opposed to one million, they still don't have a ghost of a chance in the States...unless, you either have an absolute niche product that you just need funding or...you have to have massive funding to get...market share...I think that they will be far better served to...find an exit with a US company" (Firm D).

Further to this, **Firm D** contends that government agencies are inadequate facilitators of the internationalisation process of indigenous Irish software firms and offer unsuitable policies and procedures.

"I think that EI (Enterprise Ireland) could do a better job...they're too complacent...they're barking up the wrong tree and...most of the services they provide...are not appropriate...We needed someone to come behind us and be guarantor, that's the type of that services that they can provide...we actually need more strategic support...so...I don't think they've done a great job" (Firm D).

Firm E believe that due to high operating costs, Ireland's competitive advantage is being eroded. To balance this effect, the firm is considering implementing cost-saving strategies regarding overseas employment and the relocation of basic operations outside Ireland.

"The cost base in Ireland...is too high, competitiveness has been lost...If Ireland stays expensive, then we're gonna have to balance out our cost base by taking lower cost people from elsewhere, and having lower cost operations elsewhere...so that we can feed the Irish...side of the business (to) keep that balance up...There's an argument for being where your market is and growing faster in that market and we're not supported generally by the Irish banks or insurance companies in terms of revenue...The government and the legislators...need to buy more software from the Irish companies and they need to encourage the Irish operations of other companies to buy software from Irish companies, if they want a growth industry" (Firm E).

In addition, **Firm E** feels that both government and development agencies should play a greater role in encouraging growth within the indigenous Irish software sector through early adoption of technology and a renewed emphasis on the development of indigenous firms to compete meaningfully in an international way and to sustain the challenge of emerging software economies to indigenous firms.

"The Israelis have done well and we've got one competitor from Israel...but...we'd feel...we're the stronger proposition, so we can compete with them...but it's up to the government to just stay focussed on building our strengths up and...Enterprise Ireland...they've done a good job they just need to look at a phase two plan now" (Firm E).

Firm F expressed extensive opinions regarding the state of the indigenous Irish software market, professing that unless Ireland can create entry barriers to protect indigenous firms from foreign competition, the survival of indigenous software firms is under threat. Moreover, despite innovatory and intellectual property characteristics operating in favour of indigenous firms and lack of financial strength in comparison to foreign firms is a serious concern.

"The difference between...Irish companies and the Israeli companies would be funding and...most Israeli...technology companies would be indirectly financed by...Israeli military in some way and they can provide basically limitless funding...The Israelis would be very disciplined and organised and very well backed, especially from the...New York venture capital community...Irish companies are maybe slightly ahead...in... intellectual property...and the innovation and...when you have millions competing against thousands...it's going to be a very difficult battle unless we can put up barriers against open competition" (Firm F).

Furthermore, the issue of firm size, in comparison to international entities is further cause for worry, particularly pertaining to long-term growth objectives and future international market-entry strategies and the inability of Irish firms to undertake strategic marketing and promotion activities overseas.

"Irish companies are on the global scale, they're tiny and this is going to be a problem moving forward, because they're too small to compete internationally for any length of time successfully...We only survive because we have a certain niche...For long term success in the Irish software industry...we need more employees...capital resources...and...probably better sales...and marketing people because my own view is that Irish companies are very bad at presenting themselves well and professionally abroad because we don't have the resources to buy the polish and the spin that you see on other companies" (Firm F).

According to **Firm F**, the outlook for indigenous firms appears to be rooted within niche markets where Irish firms can leverage superior technical and innovatory competencies.

"There has to be consolidation in the Irish software market...The only way that we can compete is by being bigger and...have some...decent capital...to do proper research and innovation, because Irish companies are being very good at being just on the leading edge of innovation...and we always have to be just on that leading edge we're really too small to...exploit what we do...The Israeli companies can be quite slow to respond to market change...What the Irish companies have...is, we're very nimble... but unfortunately because we always have to be skipping ahead of where the market is going...we cannot exploit the main stream markets...We may survive in small niches...as long as we stay ahead technically...(but) in many ways they would have superior funding, superior resources and they would have...very good contacts into the US market" (Firm F).

However, the exploitation of niche markets also carries a certain amount of risk in terms of sustainability and intellectual property (IP) maintenance.

"The Israelis, they're really good at...protecting their IP, and generating IP, Irish companies are not because they can't afford to because the cycles...are very long and the cost...is quite high and then even protecting the patents once you purchase them, its quite high" (Firm F).

Further to this, many indigenous firms lack the business acumen and experiential knowledge necessary to successfully cultivate an international strategy and pursue long-term growth objectives.

"We've been profitable since foundation but that's because...we know the finances and we know how to make money, but a lot of the companies were set up by techies and they just love the technology and they love innovation, but they just don't know how to develop their businesses and they don't certainly don't know how to get that business into an international market place...Irish companies...respond to customer need too much, they don't have...the capital backing to pursue one avenue...and establish a niche...they're doing everything for anyone that comes along...which means they get fragmented, they don't have a good focus, they are always dealing with a tactical response to immediate quarter revenue returns...You have to think in five-year terms, and that's one of the problems, Irish companies are unable to think in long term, because (of) ...capital...funding and resources problems" (Firm F).

Additionally, **Firm F** calls on the government, Enterprise Ireland and the venture capital community to play an increased role in the development of the Irish indigenous software sector.

"The government has to help...Enterprise Ireland as well...Those entities have to bang heads together if they want the Irish software sector to become significant...it has to proact and help those companies...the companies are too small to do it themselves to a large degree and...what's lacking is a certain input from the government on one hand and the venture capital...community on the other, to cluster companies together to achieve goals...we have to direct and build our software industry as a vital national resource. Ireland (has) not done that" (Firm F).

The firm believes that the success of the Irish indigenous software sector lies within the development of integrated growth and clustering strategies, increased research and development assistance and finance provisions.

"If you look at the Israeli model, they are probably among the most successful countries in the world... they're very good at doing...the fundamental research whereas a lot of the research Irish software companies would have done, it's not real research, it's development for customer need and then someone calls it research...Irish companies are innovating and development...the more fluffy stuff...(it) gets turned immediately into something, whereas the Israelis are taking the long-term approach, they're taking the fundamentals and building on it. So, they would...dominate the market with that...when the time comes for that product or technology to reach maturity" (Firm F).

Firm G highlighted many concerns regarding the future of the Irish indigenous software market including the influence that emerging software economies will have on the sector, in terms of employment and technical competence.

"The...manpower element of software (will) move out of Ireland...they're going to Asia and...China, India and...Eastern Europe and that's a trend, I think that will at least change the face of the software industry in Ireland...I don't think they cause a threat in terms of innovation...they're targeting more the manpower side of technology...so...I don't think that...poses a threat to the growth...or...the value in...the technology industry...in terms of exports but I think it does pose a threat to the...employment element of our technology sector. It might...in the long term, cause some companies to move to...Israel...India...and that would have an effect on our economy...Eastern Europe I think is more of a threat...I think their standard of education...particularly in technology in...Russia and Poland...is far better...I think they're a

much bigger threat and...as they begin to become westernised and as...money pours in...I think they will leave us soon at the starting blocks" (Firm G).

The firm contends that indigenous companies will continue to grow, but will ultimately suffer due to lack of financing and the unavailability of venture capital and as such, will be acquired as opposed to an acquirer of companies.

"Home grown companies...they're gonna grow at a certain level internationally as a base and get themselves sold to a much bigger player...I don't think that we have the money or the capital resources in Ireland to build...international empires...I think maybe we'll get colonised...rather than be emperors" (Firm G).

In addition, **Firm G** asserts that the government is failing to deliver appropriate and strategically focussed programmes to aid the internationalisation process of indigenous firms, particularly regarding research and development activities.

"I think that the...focus of investment at the moment in Science Foundation Ireland is just a...waste of money, I don't see anything coming out of it...I think that the company should apply to hire... researchers to build or find a product...If more money were poured into...the foundation technologies...we could create one or two Microsofts or Nokias...in Ireland that can then grow (and) launch on the stock market...attract enough investment to internationalise I don't think otherwise we can do it" (Firm G).

Furthermore, the firm contends that government agencies such as Enterprise Ireland and Science Foundation Ireland should adopt a more integrated industrial and educational perspective to the indigenous software sector.

"I think maybe a change in the mindset of the VCs...that enables them (indigenous firms)...successfully internationalise (because) it's also about funding the marketing and sales element...so the mindset of the investors needs to be changed as well...If Enterprise Ireland had a more...specific role...where companies are funded to...cause academics to invent academics to invent" (Firm G).

In addition, **Firm G** expressed concern at potential European Union legislation, which would have the effect of permitting US companies to reproduce software identical to that in production by European firms. Such a move would present huge internationalising barriers to Irish software firms in US and European markets.

"The EU is in danger of the moment...of biting off its own fingertips...with the patent legislation it's introducing which...would remove patent ability from European software...it would therefore allow American companies for instance, to compete with identical products...in Europe (Firm G).

Firm H, however, is positively optimistic about the future, contending that lack of early successes has inhibited sector growth and that in time the Irish indigenous software market should reach a state of maturity.

"I'd be positive about the Irish software market, I think we're expecting too much from them too soon...I think it's just emerging now...there is truly a set of...experienced operational management teams for software...and this has been a key problem, nobody has done it before, well not in any volume. There's...a lot of serial technology entrepreneurs out there and...I'd actually be very optimistic about the future but there's a maturity model to go through...we've done exactly the same thing with other major tends that have been happening in Ireland over the past hundred years and this just takes a bit more time to run that" (Firm H).

Firm I maintains that reduced numbers of students taking up software in college, reluctance on the part of companies to initiate graduate programmes due to uncertainty about the future of the sector, will result in stagnant growth over the impending five years.

"Software got a bad name...around the...time of the dotcom crash and a lot of kids aren't doing software engineering anymore...I don't think there's gonna be any great growth in Ireland as a software centre over the next few years, simply because the raw material which is the qualified grads coming out into the market aren't there...As well as that, companies like ourselves are just as responsible, its not just that the students won't do it...companies are even wary about talking on grads and...investing that amount of money in them when they're unsure about the future themselves...The next five years I think it will remain, fairly static" (Firm I).

Nonetheless, **Firm I** argues that sector consolidation may not be the way forward. Instead, the firm infers that targeted programmes are required to identify firms with internationalisation potential and assist those firms reach respectable scale before seeking an international market strategy.

"Whether you could take a hundred of those and glue them together...I think it would be a wrong thing to do...The real challenge is actually to find the ones with the good idea and get them...to full international trading...status...You want to do it as quickly as possible...Out of a country if we can spot the winners early and...draw them through the maturing process as quickly as possible, without blowing it along the way, that's the real challenge" (Firm I).

5.4.1 Synopsis

Respondent firms principally highlighted lack of size and scale within the Irish indigenous software sector, emergent foreign competition, Ireland's lack of competitive position and inadequate government and development agency initiatives as significant

future internationalisation challenges. These findings largely correspond with the opinions of key informants as outlined in Chapter Three, who express concern at the erosion of Ireland’s competitive position and the threat of emergent software nations to the indigenous software industry (National Competitiveness Council, 1999; Forfás, 2004a; Enterprise Strategy Group, 2004b; Irish Software Association, 2004b). However, respondent firms seem unconvinced of the benefits of industry consolidation as proposed by Hot Origin (2004).

Table 5.4.1 Future Challenges to the Internationalisation Process of Respondent Firms

Respondent	Concerns for the future of the Irish indigenous software sector
Firm A	Sector is facing consolidation through merger and acquisition
Firm B	Emergent foreign competition Indigenous firms should consider collaboration opportunities with these nations
Firm C	Lack of scale within the sector Emergent foreign competition
Firm D	Lack of scale within the sector Sector is facing consolidation through merger and acquisition Increased funding should be made available Inappropriate government initiatives
Firm E	Ireland’s loss of competitive position Inappropriate government initiatives Emergent foreign competition
Firm F	Emergent foreign competition Increased funding should be made available Lack of scale within the sector Lack of sales and marketing ability and long term strategic planning Inappropriate exploitation of niche markets Inappropriate government initiatives Increased funding should be made available
Firm G	Emergent foreign competition Increased funding should be made available Inappropriate government initiatives Potential European Union legislation pertaining to intellectual property
Firm H	Lack of world class leaders and early wins
Firm I	Fall in the number of college graduates Stagnant growth within the sector

In summary, the principal findings of this thesis appear to largely correspond with the research of Bell (1995) and Coviello and Munro (1995, 1997), and the theory of international new ventures, as highlighted in Table 5.4, which presents the principal similarities and differences between the internationalisation process of the respondent firms and extant literature.

Table 5.4 A Comparison of Findings

	Bell (1995,1997)	Coviello and Munro (1995, 1997)	Respondent Firms
International Mindset	Yes	Yes	Yes
Internationalisation influenced by size or age	No	No	No
Initial Entry Methods	Direct Export Agent or Distributor	Direct export via network influence	Direct export Personnel export
Commenced Internationalisation	Majority of firms internationalised subsequent to receipt of domestic sales	0 – 1 1 – 3 3 +	0 – 1 0 – 4 4 +
Physically Close Markets	Yes	Yes	Yes
Impact of Psychic distance	No	Yes	No
Overseas Production	No	Yes	No
Overseas Establishments	Few	Yes (5 – 7)	Yes (0 – 2)
Overseas office function	Sales and marketing	Sales and marketing	Sales and marketing
Networking and Strategic Partnering	Yes	Yes	Yes
Barriers and challenges	Payment delays Currency fluctuations Customer communication	Examined challenges pertaining to network relationships: Control	Cultural issues Competition Finance Market forces Size and scale
Exhibit Characteristics of INV	Yes	Yes	Yes

Source: Bell, J., (1995) "The internationalization of small computer software firms. A further challenge to the "stage" theories". *European Journal of Marketing*, Vol. 29, No. 8, pp. 60-75. Bell, J., (1997) "A Comparative Study of the Export Problems of Small Computer Software Exporters in Finland, Ireland and Norway". *International Business Review*, Vol. 6, No. 6, pp. 585 - 604. Coviello, N. and Munro, H., (1997) "Network Relationships and the Internationalisation Process of Small Software Firms". *International Business Review*, Vol. 6, No. 4, pp. 361 - 386. Coviello, N. and Munro, H. J., (1995) "Growing the entrepreneurial firm: Networking for international market development". *European Journal of Marketing*, Vol. 29, No. 7, pp. 49 - 61.

The internationalisation process of respondent firms is comparably similar to studies conducted by Bell (1995, 1997) and Coviello and Munro (1995, 1997) and emphasises that the internationalisation of Irish indigenous software firms is an accelerated version of the process suggested by the above authors. The firms commence internationalisation activities soon or before inception to physically close markets such as the UK or Germany, quickly established overseas offices and engaged in strategic partnering arrangements. Therefore, respondent firms exhibit increased characteristics of international new ventures than that of the previous studies. Barriers and challenges to the internationalisation process primarily concerned cultural and market issues as opposed to procedural and customer service concerns related by Bell (1995, 1997) and network issues of control according to Coviello and Munro (1995, 1997).

However, the following chapter presents a further discussion of the principal conclusions of the research, details the internationalisation process of Irish indigenous software firms, and the main characteristics of the process. The chapter also offers recommendations for further research, recommendations for managers and public policy.

Chapter Six ~ Conclusions and Recommendations

6.0 INTRODUCTION

This concluding chapter will present the key findings of the research. The principal research question and research objectives are outlined under the headings of; propensity internationalise, basis for seeking overseas markets, overseas market entry mechanisms and progression to future overseas markets. The chapter concludes with a discussion of the contribution of this research to literature, recommendations for further research, recommendations for managers of Irish indigenous software firms and recommendations for public policy.

6.1 THE INTERNATIONALISATION PROCESS OF IRISH INDIGENOUS SOFTWARE FIRMS

Intangible elements have had a widespread influence on the internationalisation process of respondent firms. For instance, the findings suggest that reputation and credibility appear to have a huge influence on internationalisation in terms of market entry, strategic partnerships and market progression. In addition, the impact of experiential knowledge upon the process should not be ignored, as evidence was found to suggest that it plays an important role regarding the firm's perception of overseas markets, initial internationalisation behaviour, market progression and the establishment of strategic partnerships. Experiential knowledge gained in previous employment was an important facilitator of initial market entry and subsequent internationalisation process activities. Previous employment contacts and personal network activities played a fundamental role in targeting overseas markets. Founder and firm reputation was considered an important method of advanced entry into overseas firms. Moreover, SME internationalisation activities are a function of entrepreneurial behaviour, which

encompasses the role of the external environment and influence of social and environmental network activity. International entrepreneurship literature provides a valuable contribution to the study of such behaviour. It is evident that existing internationalisation theories fail to encompass the diversity and dynamism of this process due to a historical viewpoint on large manufacturing firms and an over reliance on the theory generated from such studies, such as the Uppsala school and FDI theories. In the context of Irish indigenous software firms, these theories fail to sufficiently and clearly explain international expansion activity. Therefore, these research findings suggest that the internationalisation process of Irish indigenous software firms encompasses the following characteristics of international involvement.

6.1.1 Propensity to Internationalise

Recognition of limited domestic software market opportunities influences the adoption of a global mindset to seek overseas markets, usually from inception. This seems intrinsically linked to intangible elements such as managerial commitment and experiential knowledge (from previous employment), which prompts firms to engage in internationalisation activities. Therefore, the importance of experiential knowledge as a crucial factor in the internationalisation process is highlighted (Cicic et al., 1999; Blomstermo and Sharma, 2003). The importance of the firm founder (Edvardsson et al., 1993) and firm characteristics in instigating an internationalisation strategy (Cicic et al., 1999) is evident.

6.1.2 Seeking Overseas Markets

Overseas markets are sought on the basis of market opportunity, market suitability or client-seeking activities. These markets tend to be located in Europe (UK, Germany) or

the US, in accordance with inherent trends within the software industry, as opposed to psychic distance. Despite this, firms displayed in-depth knowledge of overseas markets and possible cultural incongruity contained therein. Cicic et al. (1999) maintain that cultural distance presents increased problems for service firms. However, in the case of this study, the research suggests that the inherent characteristics of “storability”, intangibility, inseparability and heterogeneity within software as an internationally traded service, do not serve to constrain overseas activities, as the majority of firms sought international markets from inception. Consequently, most respondent firms displayed traits of international new ventures or “born global” firms (Rennie, 1993; McDougall et al., 1994) as they sought from inception to derive a significant proportion of revenue from overseas markets. This international mindset also positively influenced management commitment to seeking overseas markets and further international expansion.

6.1.3 Entry Mechanisms

Firms gain entry to foreign markets via direct customer targeting techniques, leveraging previous contacts, reputation or relationships and strategic partnering activities. The establishment of overseas offices or representative status principally concerned with sales and marketing functions was found to follow for most firms. Representative status permits the firm to evaluate overseas markets without incurring large investment or high levels of risk. Overseas offices allow firms negate “liability of foreignness” and exhibit similar characteristics to domestic firms in that market (Lu and Beamish, 2001), whilst seeking for further foreign market opportunity and possible strategic partnering activities in that market.

6.1.4 Further Market Progression

Further market progression is then achieved through the restatement of the above strategies in a dynamic fashion, through increased use of strategic partnering activities and the establishment of further overseas offices. Strategic partnerships facilitate firms' overseas knowledge acquisition and market entry mechanisms. Furthermore, the researcher envisages that some respondent firms may, in time, establish overseas production facilities. This is due to the loss of competitive strength within Ireland and the availability of cheaper labour and software development activities from cheaper economies. As such, firms may seek overseas production and/or outsourcing activities to balance this high cost base with lower operating costs elsewhere.

6.1.5 Barriers and Challenges to the Process

Irish indigenous software firms are characterised by features such as an innovative and flexible nature and an export niche market focus (Gallen, 2001; National Software Directorate, 2004). In addition, due to the high technology nature of the industry, funding mechanisms are limited for such firms (Bank of England, 2001). The principal impediments to the internationalisation process of Irish indigenous software firms appear as consequences of these factors. Respondent firms highlighted their principal barriers and future challenges such as, size and scale deficiencies in comparison to larger well-funded customers and competitors, market forces, obtaining finance, the changing pace of technology and human resource issues.

6.2 KEY RESEARCH FINDINGS

The following key findings in relation to the internationalisation process of Irish indigenous software firms are evident from the research.

- ❖ Managerial characteristics and previous employment experience results in an international mindset and increased commitment to instigate and sustain an internationalisation strategy.
- ❖ Non-owner managed firms held passive attitudes to internationalisation.
- ❖ The age and size of respondent firms did not influence the internationalisation decision.
- ❖ The internationalisation process of indigenous Irish software firms is driven out of small domestic market size and in some cases related to the influence of venture capitalists and the reluctance of domestic firms to purchase the software and commitment to seeking overseas markets.
- ❖ Indigenous software firms actively seek markets on the basis of niche market suitability as opposed to psychic distance.
- ❖ The majority of firms initiated an overseas office, serving a sales and marketing function and principally staffed by a mixture of domestic and local staff.
- ❖ The UK market is seen as a logical first step in seeking overseas markets, as it is easily served or entered from a domestic base.
- ❖ The Uppsala stages, the innovation-related frameworks and the Eclectic Paradigm do not sufficiently explain the internationalisation of indigenous Irish software firms.
- ❖ Support was found for the application of the Network Approach to the Uppsala Stages framework as proposed by Coviello and Munro (1997) and for Bell's

(1995, 1997) study of the internationalisation process of Irish indigenous software firms.

- ❖ Irish indigenous software firms exhibit characteristics of International New Ventures and “Born-Again Globals”.
- ❖ Strategic partnering activities facilitate the internationalisation process of Irish indigenous software firms by providing; mechanisms for overseas entry, overseas contacts and allowing firms to leverage credibility of association and increase firm reputation in overseas markets and seek further international expansion.
- ❖ Leveraging previous contacts enhanced credibility and enabled advanced methods of foreign market entry.
- ❖ The principal barriers and challenges to the internationalisation process related to size and scale, finance, overseas competition, ineffectual government initiatives and overseas cultural issues.
- ❖ Future challenges to the internationalisation process of Irish indigenous software firms appear to concern the threat of emergent overseas competition, lack of size and scale within the sector, lack of funding availability and concerns regarding inappropriate government initiatives.

6.3 CONTRIBUTION TO LITERATURE

This study has shown that traditional theories of internationalisation (The Uppsala School, the innovation-related frameworks and the Eclectic Paradigm) fail to offer a sufficient description of the internationalisation process of Irish indigenous software firms. However, alternative theories (The Network Approach and International New

Ventures) offer a better explanation of this process. Through recognition of inter-firm relationships, strategic partnering activities and noting similarities between the characteristics of respondent firms and attributes of “Born Global” and “Born-Again Global” firms, the research has shown that Irish indigenous software firms may be classed as international new ventures. The internationalisation process of Irish indigenous software firms was previously assessed by Bell (1995; 1997) as part of a cross-cultural study. However, Bell’s study fails to present a complete picture of the internationalisation process in the context of Irish indigenous software firms, does not sufficiently account for the influence of strategic partnerships on the process and is limited in its sole concentration on “Stages” approaches to the internationalisation process. Consequently, this research has presented a more holistic approach through incorporation of traditional and alternative theories to capture the internationalisation process, than that of previous studies in an Irish indigenous software firm context.

6.4 LIMITATIONS OF THE STUDY

Although the researcher made every effort to enhance the validity and reliability of the research, by conducting pilot interviews, following transcription guidelines and seeking to minimise retrospective bias, the study is not without limitations. The use of a single service sector means the research may not be applicable to all internationally traded services. Furthermore, the use of a small sample further inhibits generalisation of the research findings. The following recommendations for further research stem from these limitations and the research findings.

6.5 RECOMMENDATIONS FOR FURTHER RESEARCH

Due to the similarities inherent within the findings with those of Bell (1995) and the time constraints of this research, it would be useful to conduct a longitudinal study into the internationalisation process of Irish indigenous software firms, incorporating firms outside of the Dublin area. In addition, further research should examine the findings in comparison to internationally traded software firms in other countries or a cross-national study which incorporates the similarities and or differences between Irish software firms and foreign firms. The research findings suggest that external influences, such as development agencies and venture capitalists have a significant part to play in the internationalisation of Irish indigenous software firms. Many respondent firms voiced dissatisfaction at government policy and lack of support from government agencies concerning both firm establishment and internationalisation strategy. As a result, future research could centre on the role of these bodies as enablers or disablers to the internationalisation process and their effectiveness to indigenous firms regarding export development programs. Furthermore, a follow-up study of respondent firms would be pertinent to discover the realised outcome of the firms' intended future progression strategies and to investigate the longer-term impact of strategic partnering on the internationalisation process.

6.6 RECOMMENDATIONS FOR MANAGERS OF IRISH

INDIGENOUS SOFTWARE FIRMS

The findings suggest that firms who leveraged contacts and relationships from previous employment, personal networks and strategic partnering activities gained advanced entry into overseas market. Indigenous software firms should seek to leverage firm

credibility. This could be achieved through direct targeting campaigns, public relations strategies, strategic partnering and engaging a diverse and experienced board of directors. As personal and social issues underpin the strategic partnering process, firms should be mindful of preserving the informal sub-context of the relationship. Regarding indigenous software firms, the role of experience is vital. Software firms engaged in international expansion as a function of previous international experience and familiarities with international cultures. These firms have a wealth of experiential knowledge and start-up indigenous software firms have much to learn from these experiences. In addition, both respondent firms and the development agencies highlighted the opportunity for indigenous firms to engage in strategic partnering or outsourcing activities to emergent software nations. Irish indigenous firms should seek to capitalise on inherent firm advantages such as flexibility and innovativeness while also seeking synergy with lower cost economies in terms of software production. Most respondents highlighted their awareness of overseas cultural issues, which highlights the importance to other indigenous software firms of being aware of cultural overseas issues before engaging in internationalisation activities. Key informant interviews and respondent firms mentioned the importance of adequate and appropriate market research and research and development activities in preparation for internationalisation activities. As such, the development of commercially appropriate software is of vital importance, as indigenous software firms generally lack the size and scale necessary to “wait for the market” in order to exploit the innovativeness of the software offering.

6.7 RECOMMENDATIONS FOR PUBLIC POLICY

Respondent firms stated that despite gaining international experience from previous employment, the founders might have lacked the operational knowledge necessary to establish the business. Perhaps this is contributing to a lack of scale that these firms are failing to achieve. Indigenous software firms know where the markets are and how to exploit their knowledge and networks to get there, but lack the operational knowledge in establishing the firm in order to seek these international markets and public policy has clearly failed to provide a strategic direction for these activities. It is clear that respondent firms felt let down or in some cases hampered by public policy in regard to establishing their firm on an international stage, with Enterprise Ireland in particular facing much criticism by respondent firms. The feeling amongst respondents is that Enterprise Ireland is failing to achieve the aims for which the agency was established and this is a very serious issue for public policy and for budding indigenous software entrepreneurs. Government and development agencies have a valuable role to play in developing appropriate and supportive mechanisms directed towards indigenous software firms. These initiatives should comprise; finance provision, overseas cultural knowledge and advice regarding the establishment and maintenance of strategic partnering activities. The government should take note of these serious concerns to develop and tailor appropriate strategies to ensure that Ireland remains the software capital of the world. Indigenous software firms would then be facilitated to gain the confidence and skills required to operate internationally.

In addition, Ireland's position as a world leader in software development and innovation should be more widely publicised, particularly since the industry has received much bad press and lack of investor confidence in recent years. The sector seems to lack

confidence at the moment, yet the promotion of Ireland's software cluster would do much to encourage inward foreign direct investment and foster a greater awareness of Ireland overseas as the software development and innovation capital of the world, thus enabling indigenous firms to seek foreign markets with increased confidence.

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***Appendix A ~ Summary Statistics of
Employment, Revenue and Growth in
the Irish Software Sector 1991 - 2003¹⁸***

¹⁸ *Source:* National Software Directorate. (2004). *Software Industry Statistics for 1991 - 2003*, Available on-line at:
<http://www.nsd.ie/html/ssii/stat.htm>.

Chart 3.4a Software Industry Employment 1991 - 2003

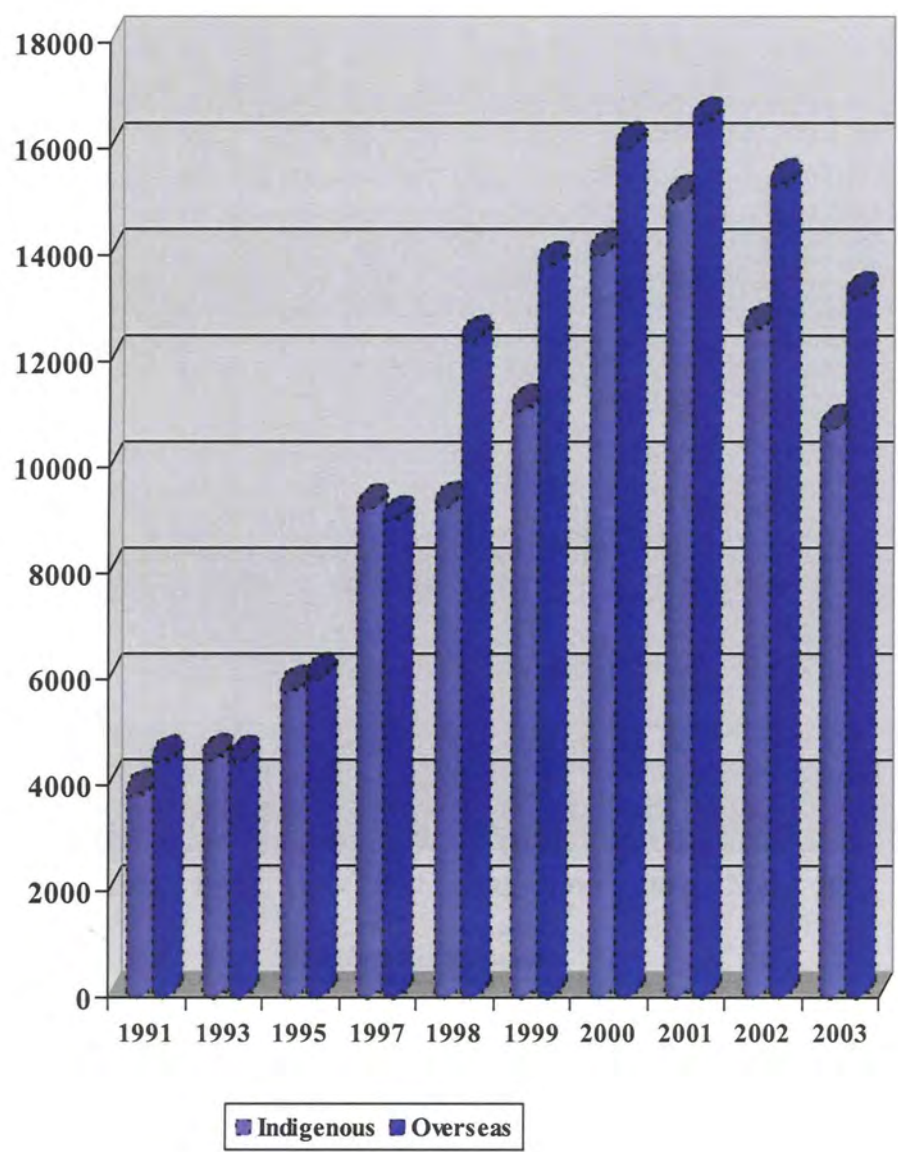


Chart 3.4b % Employment Growth 1991 - 2003

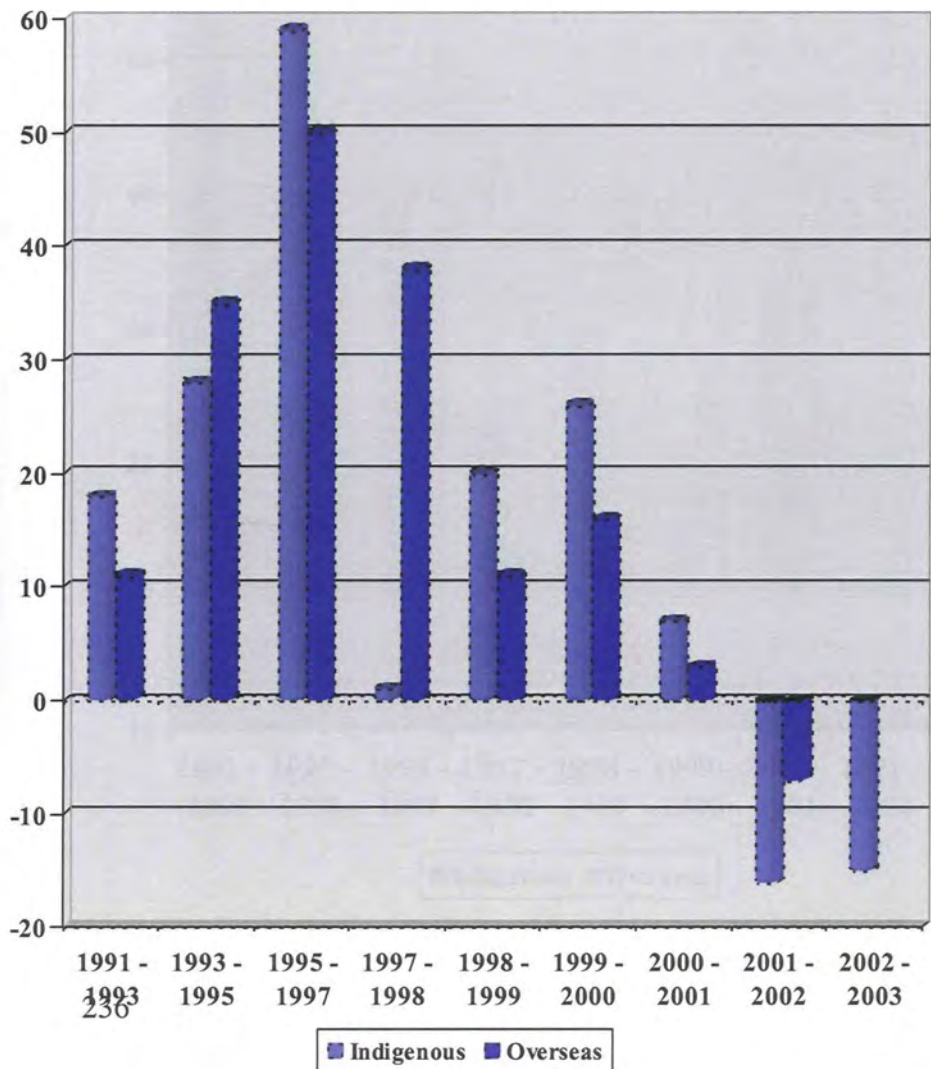


Chart 3.4c Exports of the Irish Software Industry 1991 - 2003

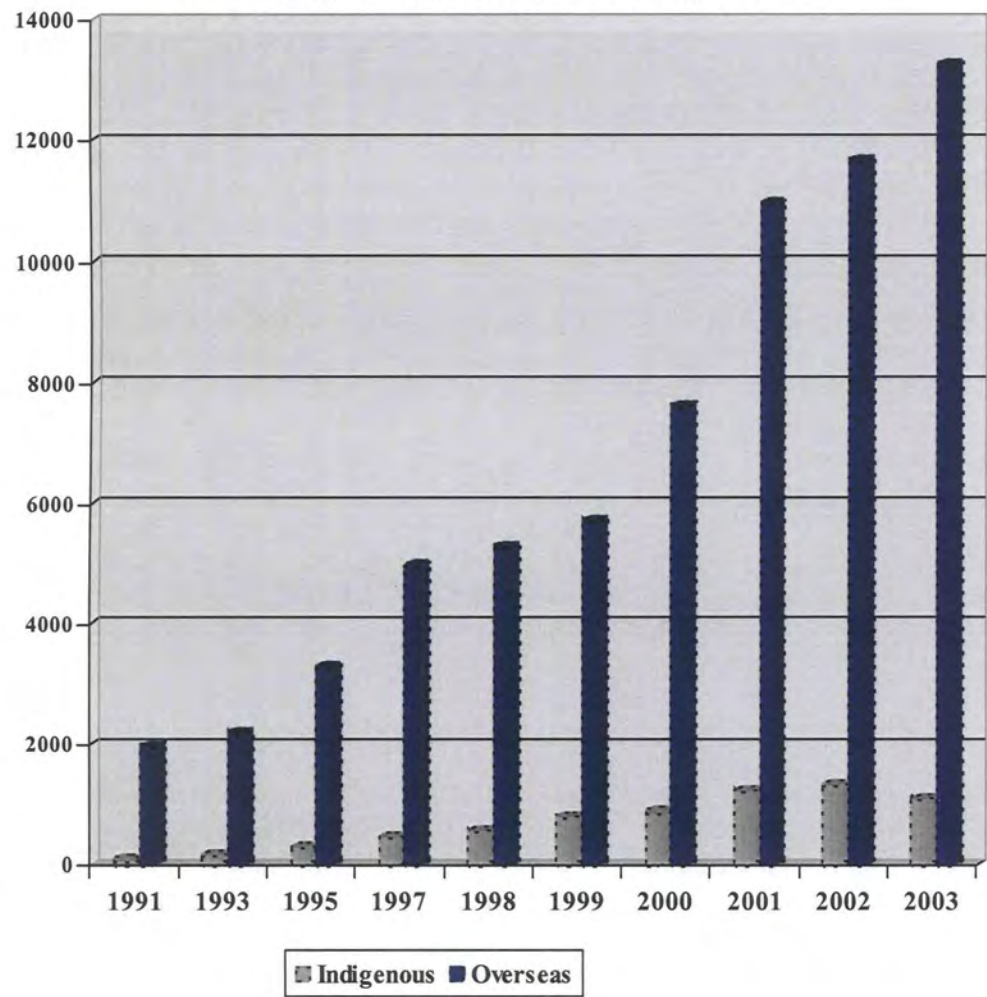


Chart 3.4d % Export Growth €m 1991 - 2003

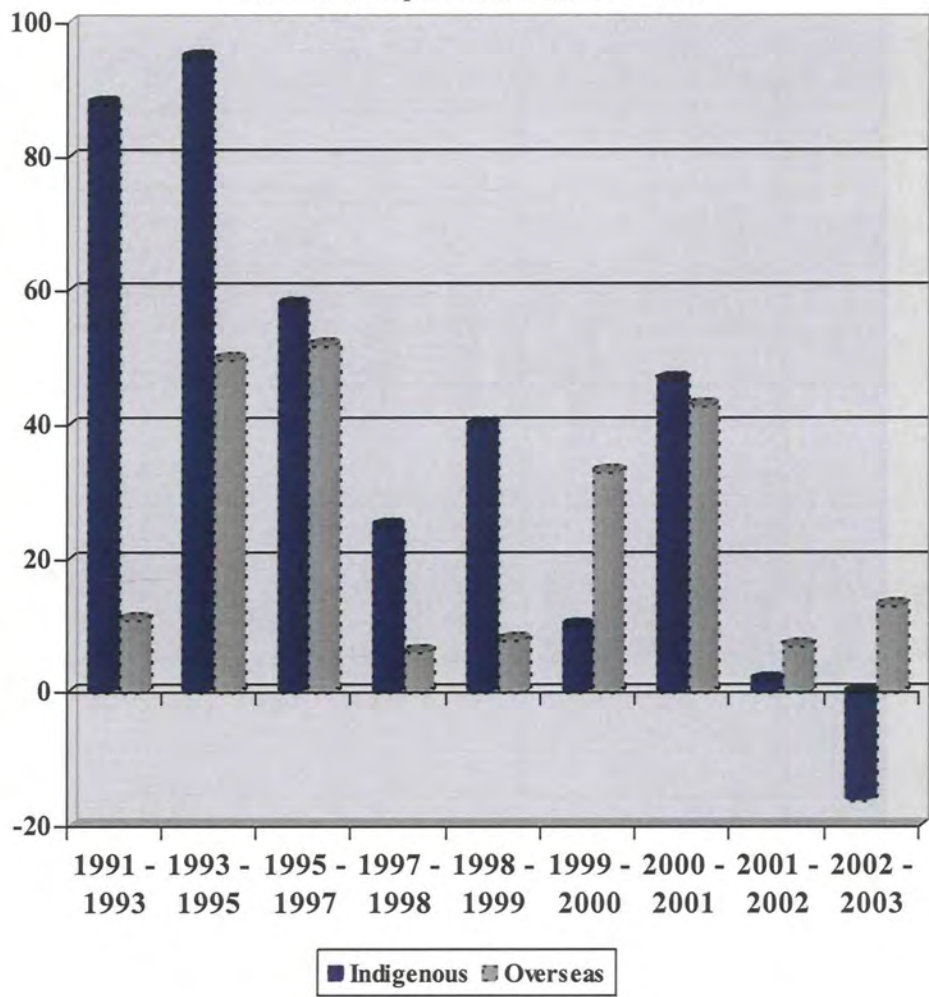


Chart 3.4e Revenue €m 1991 - 2003

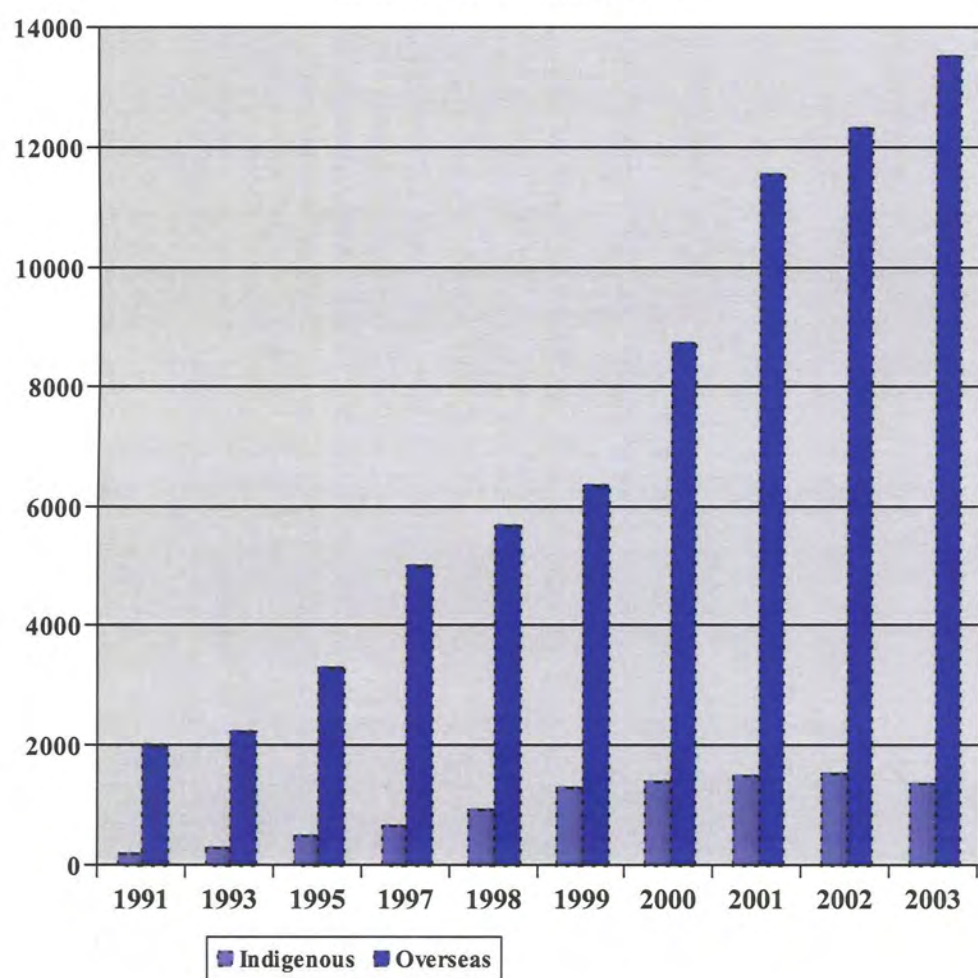
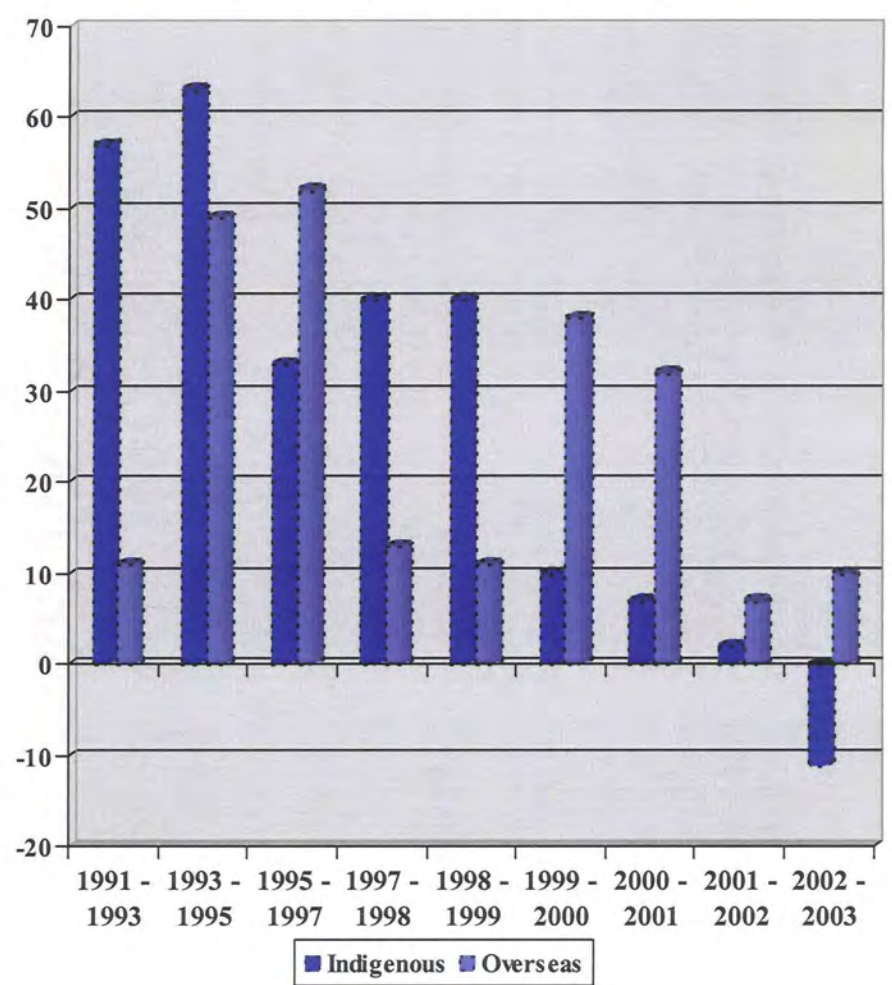


Chart 3.4f % Revenue Growth 1991 - 2003



***Appendix B ~ Key Informant &
Respondent Interview Guides***

Date.....
Time.....
Agency.....
Conducted with.....

My Profile:

Internationalisation of indigenous Irish Software firms located in the Dublin region:

The barriers and threats to the process and the use of strategic partnerships as a facilitator for internationalisation of these companies

Development Agency Profile

Mission statement

Functions of Forfás

Respondent Profile

The Sector:

Internationally traded services has increased by six times since 1990

Small domestic market

Operate in Niches

Computer exports is largest component of overall services exports

No option but to internationalise

International from inception

ICT sector employs 30,000 – same as MNEs

Based around software products as opposed to software services – local services

Dot – Coms – Use of internet

- Small Cos
- Gateway
- Price Standardisation
- Network support
- Market Research
- Sales

Fostering of enterprise

Strategic partnering

Culture of entrepreneurship

Promotion of innovation

Funding

Clusters –Networks

Building of relationships- Between firms and competitors, customers and MNEs

- **Information exchange**

Regional disparity – aids network development

Government – adopter of technology

Companies achieving scale

Policies

Barriers and threats

Future of the service sector - Internationalisation

Date.....

Time.....

Conducted with.....

Demographics - Firm – background information

- Age of firm
- Product Suite
- Size – No. of employees
- History of the firm - The idea of starting the company
- Funding of the company

- Internationalisation motivation
- Aware of internationalisation?
- Feelings toward “internationalisation”
- Domestic sales? – when (before or after internationalisation?)
- Product – service - combo – has this altered

Demographics – Manager – previous experience

- Owner previous experience
- Previous international experience – with whom
- Foreign language and culture experience
- Manager perceptions of starting firm – international mindset
- Knowledge skills acquired with previous experience and impact

Pre – internationalisation behaviour – determine strategy

- Business climate at the time?
- Market then product or vice versa
- How many target markets?
- Uncertainty of unknown
- Knowledge of the market
- Perception of market
- Knowledge – barrier?
- Perceived risks - Actual risks
- Acceptable risk level
- Impact of previous experience

Culture of internationalisation in Irish software

- Cluster benefits – knowledge pool
- Multinational benefits - Existing firms – knowledge learned
- Dublin as location
- Role of the government

International behaviour - the process

- Internationalisation trigger – proactive or reactive
- Preparation (for internationalisation)

- Year of first international sale – Where? Steps taken to internationalisation (timeframe)
- Customer selection and retention (after reference customer)
- Product or service customisation
- Flexibility of management and firm - opportunistic
- Intended vs. realised strategy

Entry mode into 1st and subsequent markets

- How long before?
- Replication of domestic strategy?
- Wholly owned entry mode
- Psychic distance – influence
- Influence of technology
- Subsequent expansion – where? –
- Standardisation versus customisation
- ❖ 2nd market entry
- Speed of internationalisation

❖ **Creation of international opportunities**

❖ **How long before “internationalised”**

❖ **What was learned**

❖ **How was that learning integrated**

❖ **Transfer and integration of experiential knowledge**

❖ **Seeking alternatives**

❖ **Commitment to internationalise and continue to internationalise**

❖ **Overseas office – function?**

Management of internationalisation - plan lead organise and control

❖ **Same formula for each market**

❖ **Who managed the process Managerial control – entrepreneurial trait**

❖ **Managing interaction with customers (contact level)**

❖ **Market characteristics sought – active search**

❖ **The locus of production – where?**

❖ **Nature of the product/service – confidence, adaptation, customisation, standardisation**

❖ **Core competency**

Costs - Drivers and internalisation

- Issue of company size - Issues of scale Resource constraints
- Influence on market entry
- Driver
- Internalisation

Human resource issues – staffing of foreign offices and management of the process

- Foreign office staffing - Existing employees travel?
- Training
- Trust
- Client involvement – service characteristics

Barriers and challenges – impediments to internationalisation, pre internationalisation and during the internationalisation process

- At all stages
- Internal
- External
- Market
- Surrounding – govt etc
- How surmounted - Knowledge gained

Competition – who? Strategy for dealing with

Strategic relationships

- Cause and Effect With whom When Relationships at firm or individual level
- Relationship seeking (psychic distance)
- Issues of trust
- Control
- Exchange
- Depth of the relationship
- Mimetic behaviour
- Strategic partners – when – local partners?
- Bring about change - influence
- Problems encountered – how surmounted?
- Unforeseen circumstances – issues,
- Drawbacks of relationships
- Description of these firms (what are they to the firm)

Role of technology

- Facilitator of internationalisation
- Technological change

- Harnessing of internet technology
- Network facilitator

The future – their view

- Present challenges for the firm and solutions
- Future challenges for the firm and solutions
- The future of the sector for the sector
- Do it all again

Additional Information/Notes

Appendix C ~ Letter to Sampled Firms

Address:

Dear,

My name is Kathy Keeney; I am currently undertaking a Research Masters (MPhil) in conjunction with The School of Marketing within the Dublin Institute of Technology, Aungier Street.

The project is examining the internationalisation processes of indigenous Irish software firms. As you are probably aware, the indigenous Irish software sector is largely dominated by firms trading internationally, serving niche markets, due to a small domestic marketplace. As such, many indigenous Irish software firms seek growth in international markets through internationalisation.

To date, I have completed extensive desk research regarding internationalisation processes and international trade and the indigenous Irish software industry. The next stage of the research is to undertake a number of informal interviews with management of small to medium indigenous Irish software firms, who successfully trade internationally. In this respect, represents an excellent case for our research and would allow us to examine the internationalisation processes of a company which has seen considerable internationalisation success since inception in through a unique product/service/and service offering.

I would be most grateful to meet with you to conduct an informal interview in order to discuss your experiences in international trade and internationalisation, the impediments faced by your firm and the use of network relationships as a facilitator in becoming an internationally traded software firm. Participant firms will also receive a copy of the final report of our study.

I would be most grateful if you will consider my request for your co-operation in this matter. Should you require further information you can contact me by email ator by telephone at or I will be in contact soon by telephone to discuss any questions that you may have regarding the research.

Yours sincerely,

Kathy Keeney BSc. (Mgmt).

*Appendix D ~ Sample Interview
Transcript*

Date.....

Time.....

Company: Firm E (5)

Conducted with: CEO

So to start off with, your own background, you worked in (previous employer) is that correct? That's right. For a few years before, before the whole thing happened, can you tell a little bit about that and how it came about?

Yeah, well I've been working with eh insurance software and banking software now for about, what, eighteen years since I left college. And, em, initially I worked within an insurance company, em, for about four years, that was (company name) and then, em, I went to England and I joined eh, (previous employer) and (previous employer) was an insurance software solutions company, em, selling and delivering back office administration systems for insurance companies. So I spent seven years with them, or well almost eight, and I worked in England for a year, em, as a development manager on their life assurance systems. Then I spent, em, two years in Denmark where I implemented their life assurance systems and then became their account manager for Denmark and then for Sweden and Norway. So, we started putting systems into those regions and then I moved to Holland and I became a general manager for the Benelux. And we were selling and implementing insurance solutions and we also looked after Eastern Europe from the Benelux because a lot of Dutch and Belgian companies went into Eastern Europe. So by 1993, em, when I suppose things were at their height in (previous employer), we'd about a hundred and thirty customers in seventeen different countries in Europe. A lot of the back office systems in insurance companies in Ireland would actually be (previous employer) systems so, then we became market leader in about seven or eight years, so that's the background I had.

So you gained a lot of international experience in dealing with different companies and different countries as such and how did you think that fed back into, into your relationships now with your customers and?

Oh yeah I mean it's very important and I think that em, it fed back very importantly into what we do at Firm E today. In (previous employer) I'd worked in, em, development implementation and then sales, so I had a broad background in, in, eh, business development in (previous employer), I met a lot of really big companies, em, and did a lot of important implementations for them, so those relationships helped me then to kinda set up Firm E and, em, I would still keep a lot of those kinda senior relationships

that I would have had in (previous employer). I would keep them today even if we're not doing any business. So your reputation is quite important as a, a sales director CEO, em, and those relationships that I built up with (previous employer) helped me to build up Firm E in the first few years, em. And even today, that experience in (previous employer) is still very valuable because they have so many customers in Europe, em, that, I, I always come across them you know. Now (previous employer) was bought out in 1993 and, em, shortly after that I decided to get out and set up Firm E, because they became too dominant in the marketplace and eh, I didn't basically agree with the structure of the way that they were doing business anymore. Em, they were bought out by a company called (company name), and (company name), was bought out by a company called (company name) so they're by far the biggest player in the world in insurance and banking, em. They provide lots of services as well as software and we tend to compete against them, eh, quite successfully now we're grown, but we're much more modern and we've a dynamic model than they would have.

Okay, em, so I believe that you worked in the UK for some time before coming back to Ireland to set up Firm E, as such Firm E changed from Managed Systems?

Oh yeah, yeah well originally when I set up Firm E, I set it up as a services business, and the big issue, em, at the time when I was setting up Firm E or MSC as it was then, Managed Solutions, was that eh, software systems were costing a lot of money to implement so em, that's where the managed bit comes in because we effectively decided that we'd end up as a, a services business em, implementing other people's software and we'd do it within a managed time frame for a managed price, em, em. But the longer-term goal was to build software ourselves, so MSC was the catalyst that basically Firm E was born from. But it took about eh, eight years of running as MSC to build up the capital and build up the customer base and build up the software side of the business em, to allow us to kind of rebrand the company to a product name called Firm E, and that happened in 2001. So MSC was a really important funding machine and indeed em, a customer kind of em, magnet as well, we built up a lot of clients through MSC, so MSC is now called Firm E, Firm E is the product, Firm E the company, Firm E the person and em. The MSC bit is gone now, you know, we'd a fairly big successful rebranding there in 2001.

Em, your first customer, em was your first customer a UK, am I right in saying that your first major customer, you sold CRM software to Britannia? Yeah. Was that your first major customer, how did that come about?

Well, em, we were a runnin as MSC for, from 1993 and by 1995, I'd hired some software development people. So em, effectively the software development company was born in the beginning of kind of 94, 95. Em, now we had about thirty consultants working for different companies around the world, em, as part of MSC and the revenues we got from that allowed us to invest in the research and development side. But we had to bring in new staff, train them and eh, effectively eh, get them up to speed on insurance software and packages and that, so it was a slow start, em. We hired local Irish people and they've ended up as kind of em, some of them are still here, in terms of shareholders and that em. We gave them shares, or I gave them shares because em, I felt that it was important to tie them in. Em, by 1996, we did a lot of kind of hunting around the market, I really was the salesperson at that stage, em, and I found Britannia in the UK. Em, initially I approached the insurance company to develop a new insurance system for them, but in talking to them it sounded like their building society parent needed a customer management system as well. So, em, effectively the insurance company introduced me to the banking group and from there, em, they liked what we were doing, in terms of new modern technology and a new solution for managing customers, em, and worked very hard to convince them that they should do this with us. So, em, they did, they became the first customer. they licensed the software, and we had it built and implemented by 1997, em, and we were rolling it out during 1997, quite a big project because they had two thousand people at the time, they'd got three million customers, two hundred branch offices a couple of big call centres. They wanted everyone to have this, this system, em, and that original system was called Clientwise, which was a customer management system. We took it from there.

And why did you decide to go after a UK Firm As opposed to talking to some of the companies here in Ireland?

The Irish companies, em. I did talk to all the companies in Dublin, but I couldn't convince any of them em. They're less, they're, they're Ire, Ireland's a strange place for that type of thing, em, I dunno what it is in the psyche, but, eh, they didn't eh, they did a lot of listening but they didn't basically, eh, come forward. The British were more open to, em, making the investment and making somethin happen, so I think we had

two customers in England before we got our first one in Ireland, em, so, it's a small market as well relative to the UK and the rest of Europe, em. But it's very, very slow for Irish financial institutions to do any investment in software. We've four customers here now but we've got like twenty customers abroad.

So after the UK, and, and then back to Ireland and then what happened in terms of, of entering into different countries at that stage?

Well more or less where you see Firm E customers you'll see that Michael Kelly has been in that country before. So really going back over contacts, so Holland was where I lived for most of my time with (previous employer), and I built up a customer base for (previous employer) of about twelve insurance companies, so there's four or five insurance companies now that are using Firm E in Holland, not necessarily the same ones but I mean the, the track record and reputation was there and some of them were, were customers of (previous employer) that I used to manage. Then in to Denmark where I lived for a couple of years we sold a system up there to the biggest insurance company, Scandia, through old contacts and then we went into the States and we started to do business over there, em, took us a while to get going. But we've got five customers in the States, and then in Australia, and New Zealand. I'd contacts in Australia, and again we've a customer there. We've a customer in New Zealand. I also hired people in Australia who I knew from ten years ago, em, who've been great. they've been able to help us as well locally and they understand the business so it's a question of going back over old ground and renewing relationships and building up them on the basis of that, while still manufacturing the software here in Dublin.

Okay so all of your production is based here?

Well this is the software factory where the product is built. But a lot of work is done on site as well with customers when they want customisation or implementation, em, but the majority of it would be here, in Dublin.

And you have overseas offices?

Office in Holland, Denmark, England, the States, em, Australia and we'll have a new one in New Zealand shortly as well.

And would they be utilised in terms of providing sales support or for the more customised services like you said on site?

Sales, sales support initially and then we hire services people, people locally. What we're finding is, that the Irish eh, are, eh, it's becoming a less competitive environment in Ireland in terms of people and skills as in its quite expensive and eh, Irish people are less willing to travel as well. Ten years ago, they would have travelled anywhere, but they're basically less willing now. The standard of living and the cost of living has increased, em, so maybe we're getting a bit lazy and (laughs) **maybe, maybe, and maybe a bit complacent as well**, I mean it's well known that the Irish economy is, em, losing competitiveness fast. So we've tended in the last twelve months or so to start looking abroad for hiring and, eh, taking lower cost people from other countries and then using them in their own country. The other thing as well is that, you know, you can't sell in Australia and New Zealand, you can't sell for the same kind of price that you get here or in the UK for that matter, em and even the US is a bit lower in price than, eh, Ireland, England, which is hard to believe but that's the way things have gone you know. So you've to careful in terms of your margins that you don't send your expensive people into a low cost economy.

Okay, in terms of your, you as you've said have widespread international experience, did you come across any issues that were unforeseen in terms of lets say culture or business practices or had you seen all these issues and you had to deal with them beforehand?

Cert, certainly in Europe, I'd see them all, and knew how to deal with them and you know, there was huge amount of experience coming from a player like (previous employer) that was brought into Firm E for free, kind of. In, in the States, I found that, eh, they're more aggressive than the Europeans. They're more of a sales and marketing culture so they, they're very tough on negotiations, same thing goes for Australia and New Zealand in terms of, em, new foreign countries, em, I think the Asia-Pacific market is probably gonna be the biggest learning part for us and we're in Australia and New Zealand and poised for places like China, Tokyo, and Japan and places like that, that probably is the future, in terms of learning, and we'll see big cultural change there in terms of how they want to do business, very formal in that I believe. But so far no, we haven't seen a huge big difference. You see, we're dealing in the niche of financial services, so, it's a globalised business already so therefore, you're not walking into kinda completely strange environments, you know these are, these companies are multinationals already, they're used to seeing foreign cultures coming in from head

office or other offices and that's a great advantage in that geographically. We're, we're kind of dealing on a global basis but because we're in the niche, you know, it's a, it's a village within the globe.

Okay, em, so when you went to the UK market you proactively em, proactively sought out your customer is that the strategy that you use then for every market thereafter of how does that work?

Yeah, no, we want to, to find a customer before we open an office and before we invest in a market, so what we do is, em, we attack the market from outside it and we look for doors to be open and get in front of the right people. Once we get a customer then we start opening an office, and we hire people and we grow the business, so, you know, it's, it's a risk adverse way of doing it, eh, possibly one could argue that you might get a customer quicker if you open an office and you start advertising and you know, you do all your marketing, but, it's high risk. So you basically in, in, in these, eh, times you wouldn't; well I wouldn't do it anyway, so I think, the way we approached, approach it is good and banks and insurance companies are used to that, you know as a first customer in a new country for Firm E, they normally insist that we open an office and they normally understand. Like, it will take us, a few months to get everything organised. But then, they see the benefit of them being first in the country with this new software, so there's pros and cons in it for both parties.

And in terms of starting off with a lets say, an international mindset at the start, you knew that you were going to bring your company international, what kind of mechanisms or strategies or decision making skills did you have to put in place at the start?

Well we went to market, as I said that we knew, so they're places that I'd been, eh, we stayed in English speaking territories. We stayed in territories, which we knew would be close to the UK/Irish regime, in terms of the government and in the way the fiscal policy works and controls and the type of products that were being sold. Em, so we tried to stay as, kind of close as possible to what we were kind of, eh, used to and we, we stayed away from places like Germany, the southern European countries em, they're for later days really when you've established a base in the English speaking countries, whereas the Nordic countries and the Benelux, you know. They speak English and they're used to the kind of British, kind of, Anglo type ways of thinking and eh, they can speak the language and that, so they copy it. So, that would big and the same thing in

the States, we stayed out of the States until we'd enough money that we could throw money at it. you know to go into the States as a software company, even if, you know, you're only going in, in terms of eh, three or four people, you know you could have them there for a year and you actually spend a million before you get any return, em, so you need to have deep pockets and you need to be, em, you need to stick by your conviction and work, work very hard to find your first customers. Once you get your first one in the States, then it starts to grow for you, and that's what we found over the last three years, we've five now. Em, the other thing that I haven't mentioned is that, initially we, in our selling cycles it was very much based on, you know, eh, the easiest way to sell, which was through me. Then I hired one or two sales guys and I found locally that it was very difficult to hire sales people in Ireland, very little experience, em, so that, that really didn't work, I didn't get, a, a sales guy that could sell and do a deal until 2001, that's when I got the first sales guy on board that actually did his own deal and that eh, then started to grow, I've two or three more now, but it's very, very difficult to get the right people. So, one of the things we look at then is, eh, expanding through channels, eh, so partners become important to us, we'd gone after the type of companies that work with insurance companies and banks that would have credibility and they would be the IBMs, Hewlett Packards, eh, Deloitte Consulting, you know those types of companies, Unisys, eh, and they've all become partners with Firm E em, we try and work with them and kind of, one plus one equals two going in the door you got a better chance.

They tend to try and dominate the situation as well because we'd be smaller, so you've to fight quite hard for your corner, but, there is a win-win to be got out of it and that's a great help for, in terms of growing. So some companies start out and they go direct, like we did, others go through channel from day one. My own belief is that you should have both and if you can go direct initially and build your own credibility and your own sales force then you won't be dependent on anybody else but that would just be the gravy on top.

And in terms of your partners, would you, em, have partners into every country that you've internationalised into? Would there be local partners as such and then you have let's say information, network information coming from your previous contacts and is that how it all works?

No, we haven't got partners in every country that we operate in, now we should really

look at that em, what we've got is a global partner, like IBM or Hewlett Packard and they tend to have local organisations, but, they may have eh, presence in certain countries and they don't know anything about us, so, we and they have to work to make sure that everybody knows us, because they're like separate units in different countries even though they're the same brand name. Em, as regards local, eh, smaller companies, em, we haven't bothered with that yet, but we will do that, we'll work that way eventually we'll find specialists who'll work with us in each of the countries, so we'll see how that goes.

And what do you think the major advantages are in working with strategic partners and what advantages have they brought you?

Well we've learned from them. Certainly we've learned from the experience, we've eh. They, they are an extra pair of eyes looking in at Firm E, so, they tell you things about yourself that you may not want to hear but, you've got to basically correct them, em, it might be difficult to work with us, they eh, point out the ways that eh, we can make it easier, eh, things like documentation, things like, eh, training, help all those kind of things. Em, then, our pricing might be an issue as well, the way we deliver projects the risk element the, eh, the technology we use, you know all of those things, its good to have a third party kind of looking in at you, em and helping you on that side, and also the commercials, the company like IBM tends to be very tough on commercials so you can learn and you can show yourselves, well, these guys know how to take, take the money, so you learn, you can learn an awful lot, em, you can learn bad habits as well, but you've to look for the good ones.

And in terms of the level of exchange that takes place, between, between the two of you, would it be in terms of informal information or, information sharing or?

We haven't got down to sharing any assets or em, you know, intellectual property but what we do is we certainly share information about the market and who's out there, what's happening. Eh, we can co-market it together, like, so we can both invest funds in campaigns and things together. Em, and we can give kind of shared information about projects and stuff that we're working on, that's as far as it's going at the moment.

And so you actively seek out these partnerships yourself or do you?

Yeah we tend to, no, well we get no, we get, we get identified by either customers or partners you know saying that we should work with this crowd, em. A customer might

have something in place that they might want us to connect to and we may say well they've got lots of other customers lets connect to it here and lets see, who else we could connect to. So you have companies with products. Imaging is a good example where FileNet have an image sys, system in a lot of insurance companies and banks and we built the standard component that links our stuff to their stuff and then we can go around to see if they can help us sell into our customers. Partnerships are only as good as the revenue that can be derived from each company. Em companies tend to, when they're under pressure tend to be very greedy and try to take all the money so initially they're trying to shaft you and then eventually when they can't get the deal without you they tend to bring you in and they kind of have the culture of the sales guys, em, geared towards making sure they get the biggest slice of the pot em. If there's too much business and if they're looking for cherry picking the bits they want, then you'll find the partnership is even more lucrative and they'll be pushing things at you, maybe the bad things. So you've to be careful then that you don't end up with all the hard work and give them all the margin. So it's something you've to work on it hard. At the end of the day the partnerships are down to the relationships that you've got with people, the companies are behind the scenes. But you know, it's the people working together and if that's a good team then the partnership will be good.

Okay, in terms of competitors would you see yourself sharing anything, information or otherwise with them?

Oh yeah, well we talk about competitors to each other and you know, it depends on the, on the scenario. they may ask us about our competitors and they may ask us to tell them why we're better and then they'll tell us things about it, competitors, that eh, that we would want to address in terms of em, strengths that they may have, that, that the partner wants us to basically accommodate them with these strengths. so yeah we do a little bit of that as well, but you've to be careful as well because they expect that you're gonna try and eh, put your competitors down all the time, I mean that's what a sales guy will do, he'll tend to dismiss eh, his competition, without being unprofessional but he'll tend to push them out way and make sure his company is the one being considered.

And in terms of em, networks or relationships with your competitors?

Yeah, hard to do that em, from time to time our competitors have asked us to work with them and they've asked us to work with them and we've em, we've never actually done any work with them, so you know, we're open minded but we're also cautious.

In terms of scale, I mean your, Firm E is a rather large company in the Irish sense....

Yeah, I think we must be the biggest, if not one of the biggest private software companies because the other ones are public, the ones that are known like Iona, Smartforce, well Smartforce is gone actually, there's quite a few of them gone, merged out, yeah we must be one of the biggest.

And how do you feel that in an Irish sense, you're a large company but when talking to companies abroad you might be seen as smaller. Yes. And how do you feel balancing that issue of scale between the advantages of being a small company on one side and the disadvantages of a small Firm And the advantages of a large company if you know what I mean?

Well in Ireland, we're probably. Yeah we're big, em, but that doesn't seem to count in terms of us winning business. A lot of the insurance companies are building their own software and the banks, especially the two big banks; they spend millions and millions just developing their own software with consultancies. The biggest competitors we have would be consultancies who want to build software on a services basis, em, and that that tends to cost a lot of money but eh, it seems to be again, a cultural thing that the IT managers want to build rather than buy, abroad, so we have to work hard abroad to win business. Five percent of our revenue would be from Ireland this year so most of our business is abroad. How do we look abroad? In the context of the verticals that we're in, we're about a medium sized company. We're actually bigger than quite a few of our competitors, doesn't seem to make too much difference, em, providing you know you have twenty customers or more you're a relaxed scenario in terms of we're not leading edge, we're not trying to do something em, for the first time and em, when we come up against the big guys it doesn't seem to matter.

In terms of trying to balance things in our favour then we'd work with a partner. A big gun like IBM can help us a lot in making us look bigger and representing us to the customer, as if it's IBM rather than Firm E. So if the customer has any fear about doing business with a company of our size, we'll hide behind IBM and let them do all the contracts and then we'll do our business with IBM. So it, its not a, it's certainly not a disadvantage but there's no huge advantage either. Eh, I think the advantage is in, is in the customers that we have, which is the big the customer references, which are very

positive and the product set in terms of the coverage that it has across the industry that we're specialising in, and that's impressive as well and those are the kind of things that companies are looking at.

Okay, originally with Managed Systems, you provided a service, software services and then Firm E was more as you said a product, a product company yeah. Em, what do feel the advantages were of taking a product perspective as opposed to staying with the services aspect?

Em, the advantages are that eh, your product revenues continue year after year, so you're getting support fees and things so em, you've got some money in the bank, I know what kinds of levels of money we've already got in the bank for next year and the year after through the contracts that we have em. You're also building upon what, what you've already got with customers, em you're also going in to sell em, a, a project where you have a lot of the software in your pocket already and you know, you really understand that customers' needs fits into your product. The disadvantages of being a software company em, over a services company would be that services guys can discount real easy, they can sell bodies. They can build the customer's dream if the customer is kind of IT focussed and they're only interested in doing you know. They don't want a package. They want something that they want to build themselves. Then services businesses can do really well, by just kind of asking the customer what their dream is, but those kind of projects tend to be very expensive in the long run. But as I said earlier, companies still do that type of thing, less and less but if they still actually do it, so I think em. What I see is that that product companies need to stay with product and work with services businesses and that's the best way of having a proper partnership, and that's, that's our goal and we'll focus more on the product. Em, services companies need to stay in services and not get into product. There are services companies who try and build software with a customer and then hawk it around as if it's a product and that's, that's kind of, that then, scares away the product companies from working with them. Em, product revenue in, in terms of valuation of companies, product companies tend to get much higher value in stock markets and for sale as well because of their revenue, em, downstream from the product, maintenance fees and the opportunities to do upgrades and things and extend the product. So you tend to have a longer lasting relationship with a company because they can throw you out if you're services business, they can give you thirty days notice and say goodbye to you. If you're the product company they can't really throw you out if all their data is sitting on

their systems until they find a, another solution so you've more time to hang in and work something out if they're not happy with you.

Do you see any, you spoke about earlier about having a third party view and you can obtain information that you might not be prepared to hear or whatever, can you see any other drawbacks of relationships of your strategic partners and have you surmounted any challenges that they've brought to you?

Not really, no, no. I mean they tend to be quite straight jacketed as they get bigger em, and really the big, big guys tend to be very straight jacketed they seem to have a lot of internal processes and rules that they must to adhere to. So you lose flexibility em, but so long as you're open and eh, you understand that, they have criteria that they must work within. We can be the flexible one because we're smaller company. So I don't really see big disadvantages. The other thing of course is that you don't want them wasting your time so. They have more time and you know and they have more people and they could if you're not very careful they could waste your time just for you know fact finding for their purposes but having no interest in doing anything with you.

And how do you feel about the time it takes to in order to approach these companies you know to be a partner and talking to them?

Takes a long time unless you're lucky, just like making a sale to a customer our systems are very big, so they take a bit of time to persuade people to, to buy them and you're really asking a partner to help you em, and make an investment in you so they're really buying you.

Okay, what em, other barriers or challenges did you come across when internationalising do you think?

Eh, cost of travel, its quite expensive, em, that'd be a huge one. Having to put down local offices in foreign countries is an expensive thing too, hiring people abroad is expensive (phone interrupts) sorry bout, that those are the kind of challenges, it's, it's expensive running an overseas organisation.

In terms of the Irish software sector, a lot of companies have to go international from outset and there's a lot of companies working in niche markets etc, etc do you find that there's a kind of lessons to be learned and did you look to other companies within the sector that have internationalised and how do you think

Enterprise Ireland etc, would facilitate companies talking to each other and sharing information?

Well we've been, yeah we've been around since 93, we only could see one company that ever did it in this country before and that was Kindle banking systems. Their approach was to work off the back of ICL and you'll find that the Kindle software is in the kind of old empire countries where ICL was strong. India, down in the Middle East and places like that, Africa. So, em we didn't really have a role model here at all, em, the role model for me was (previous employer) where we came from, so we were first we would say. We certainly had more customers in banking and insurance than anybody else still, there's no other company in this country that has the kind of Firm A and the number of customers that we have. So we're on our own effectively in the space we're in. Em, there was Eontec in the software in the banking side, but they'd about six customers, we've about twenty five and they've sold out now to Siebel, so and their business was mainly in the States, em, so no. we'd look to European companies and US companies and we would see them as the role models rather than Irish companies. Probably now, there's Irish companies coming out that could look at us and Iona and that who did a great job, but we're in a different space. But then again I think there's probably there's too many software companies for this market. There's something like seven hundred, something like seventy plus percent are producing less than a million in turnover. So there's probably far too many of them that will never make it. quite a few have gone bust in the past few years and eh, Enterprise Ireland do a great job, em, but they need to start focusing on trying to get some world class players out of Ireland rather than seven hundred you know that then that kind of make twenty million or more. They need to kind of focus and say well how do we get too, up to the two million and five million companies. Could we have twenty of them and then that would be really valuable. So that's the challenge Enterprise Ireland have and the software industry has lots of challenges.

But I don't know many Irish software companies that have customers abroad em. There's a lot of them that depend on the Irish market and that's tough enough as well. So I think over time em, we'll see a bit of a shakedown of the number of companies and get some of them to combine with each other and that would be good as well for the industry. There's a lot of great talent coming out of the colleges and that, but a lot of these companies are run by CEOs and sales director who have no experience in doing it and that's why they basically, they've been lucky to make it.

In terms of the last few years when the economy was very high and then it wasn't so hot, em, and with issues for some companies, how did you feel, I believe that you went through a series of restructuring at the time and how do you feel that that has benefited you and?

Well we were always profitable as a business, because MSC made a lot of money for us initially. Then we started selling our products and that was profitable. Em, we took money in, in 2001. Eh, that was the first time we ever took in investment and we went abroad and got it from the (company name). Em, 2002 was a very difficult year because we lost a project with (company name), as it happened. Eh, they decided to sell their insurance Firm And we had a huge project on that. So we just had to make people redundant, we didn't have the work. So that caused us to do restructuring, em, so that was a difficult year. Last year was a good year again, we're on the growth path, we're back to profits again. That was. 2002 was our most difficult year and this year, we're back to normal, we'd be running at the 2001 kind of numbers you know. Em, what have we learned? I suppose we've learned that em, you have to cover yourself in terms of hiring too many people too quickly for, for projects. Em that you're gonna be, you know, the big projects you need to be very careful about the risk side, that the customer could cancel the contract. So that's what we learned, making sure there's an insurance policy around that.

And in terms of bring the company to IPO, do you think that that will be a consideration now?

Em, I think once I said that eh, that we'd like to do an IPO and the papers listed me as saying we're worth a 130 million and we'd be doing an IPO by the end of 2001 and then they said that I'd raised money instead because the markets had closed. That was the Sunday Business Post, but I never said that so, you've to be careful what you say to journalists, that's the lesson there. I think in the, in terms of IPO, it's not like, we're running profitably, we've enough money; it's not the be all and end all it's just a phase you go through. Em it's where you basically where you raise money and you use a different mechanism in terms of using the stock exchange. So it's not something we'd rush into. Its something that, it will, it will probably happen naturally in the next couple of years. But em, what you have to have is a very strong business model going into that and making sure as well that you're the promises you're making when you're raising money through IPO or through private finance, that you're very confident that you can do that it. So less of, less of the hype and more hard work, that's basically what the

market wants these days. The hype will probably come back into it because the people that tend to do that are actually the stock market people, em and the financial services companies that are doing these IPOs and that, and eh, they were part of the problem the last time. Plus they were, you know, the journalists hype it all up as well. And then of course you get weak CEOs who will take the temptation and go along with the flow and take the money.

Okay, in terms of your outlook for the future you said there that you have some customers in the US and you're considering other countries, to enter. How do you think you're going to do that, will you follow the same strategy that you have so far or?

Well, we've actually, Canada, I forgot about Canada this year as well and got a customer in Canada. Em, I think the English speaking countries are easy to do now from where we sit, we sit. Em, the big challenge will be, I mean somewhere like China and something like that and in that way we'd have to work with partners heavily and use third parties to get us there. Places like Japan as well, it's a massive market. South America as well but there's no money down there so we'll stay away from there for a long time, em, so really it's Asia Pacific. That's where the action is, they'd be the new markets. Germany, Southern Europe, they'd be the new growth markets. Germany is very heavily regulated. There's quite a few players in there already, em, probably go in with a partner. The southern European countries are very high growth markets as well. Spain, particularly, Portugal, Italy is a bit heavily regulated, Greece is growth, Eastern Europe is growth, that will probably be next for us in Europe, Eastern Europe so, we'll use a combination of partnerships and em, the first customer type approach as well, whichever gets us there quicker. Em, try and minimise the spend to get us the first client. We don't care whether its partner or we get it direct or whatever you know. I think as we get bigger and our brand becomes more widely known, you tend to get companies coming to you, so even the website now, we get a lot of contacts from abroad, like you know you can chase them up and see what the interest is. So our marketing people are, are eh becoming more important in terms of picking up leads, getting, getting us out the door a bit, a bit easier in terms of the selling side. You can be lucky and hire sales people who've a track record of selling into certain countries and they've got good contacts and they can open doors for you quickly but you've to pay a lot of money for them and eh, you need to be quite careful when you're hiring them that they actually have made those sales, so that's eh, a bit of an art.

And do you think that will leverage the advantages that your existing partners bring or will you look for newer partners?

Em, well we try and work with the guys we work with and try and be loyal to them and try and do business with them, em, but if there's new partners in new countries, particularly where they've got a dominance or they have a special em, edge, then you know we'll, we'll work with them. We're very open on the partnership side; we don't want to waste anybody's time. Just if there's some deal to be done then we'll do a deal. so you have to be em, have to be vigilant, that you're dealing with the right people with the right credentials and if you have then great, but they're not easy to find, those type of partners, but, em, sometimes through your direct selling you find somebody who actually has the pedigree and then you can go and work with them and approach them.

And in terms of the consideration of the acquisition trail do you think that that will be a consideration for the future?

Em, yeah, in some cases like if we can find companies that have customers and have staff that can understand our be, business, then we're interested in that em, sometimes it makes sense for two companies to come together and merge or you know, one takes the other one out.

I think we're nearly there now, em in terms of looking at the future for Firm E, I know that five years may seem an awful long time, if we say two to three years, where would see your company.

In two to three years? **Yeah.** Em, well I think that Firm E has to get itself now into the kind of hundred-million turnover type mark and a good healthy profit, with ten million or more. I wouldn't see that in two to three years, probably down the track, about five years six years maybe, depends on whether we do it organically or we, we join up with somebody, em, its certainly becoming more of a leader in the markets that we're in. So moving from the kind of twenty-five customer mark to the hundred customer mark. Em, they're the kind of challenges we're setting ourselves. Eh, growing our US business into being quite a dominant age of our, our, business em. Breaking into that Asia pacific market as well will be important, you know. Having enough money in the bank to do wherever we want in terms of further growth. Em so that's gonna mean possibly raising more money through a stock listing, or more than likely a stock listing at the right time and em, having a full kind of product suite for banks and insurance companies, so havin a much more broader offering. We're kind of a part of the way

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there in part of the front office parts of our products, but we've to do other things now, in terms of stretching out what we do in the back office. So those are the kind of things, there's plenty of, there's plenty of scope.

And I see that that one of your strategies is to introduce your front office first and then kind of back it up with your back office solutions. That would be the entryway for some of your companies?

Yeah, yeah, that's been the strategy that's worked eh, pretty much today the front office products are selling very well, the back office isn't, a lot of companies are afraid to change their back office they're more focused on the front office, that's fine with us we'll just keep working away on the big picture but making sure that we're, we're satisfying the need that's there today around front office.

And just in terms of when you further expand and in terms of the existing customers em that have used lets say systems for years, so you think it will be a challenge to kind of convince these customers to Yeah. Go with you. Yeah. And how do you think you're gonna do that?

Well its, its down to finding the right people in these companies that want change and then putting together a proper business proposition that shows that they if come with Firm E they're gonna have a better business and they're gonna get eh, savings and they're gonna get more business and their people are gonna be happier and all of that good stuff. So showing that the benefit outweighs the cost.

And in terms of the emerging economies do you think that they're going to be a threat to you in the future or?

They certainly are yeah, if you don't take advantage of them. Em, the cost base in Ireland as I've said in the beginning is too high, competitiveness has been lost. Eh, we've a lot of companies here, foreign companies, pulling in a lot of money. but if we didn't have a tax break for them they wouldn't be here, there's no way, so em, that's something we need to get right so I think we're gonna have to. If Ireland stays expensive, then we're gonna have to balance out our cost base by taking lower cost people from elsewhere, and having lower cost operations elsewhere em, so that we can feed the Irish em, side of the business, keep that balance up.

So you'll always have an Irish base?

Not necessarily, no, there's no particular reason for being here, if the tax status went then em, you know we'd have to look at it and see what's offer, what's on offer from other countries, em Ireland has to compete as well as everybody else. The fact we're here, is the fact that I'm Irish, but sure who knows where I'll be in five or ten years time. so we could be in Hungary, we could be in Poland, we could down be in China, sure who knows, the global economy is gone that way. Certainly quite a few Irish companies moved to the States, em. And em, you know that's where their market is, so there's an argument for being where your market is and growing faster in that market and we're not supported generally by the Irish banks or insurance companies in terms of revenue, so, you know, that's something that the, the government and the legislators need to look at, they need to buy more software from the Irish companies and they need to encourage the Irish operations of other companies to buy software from Irish companies, if they want a growth industry. There's a great opportunity here to have a good strong industry, but we're now in phase two and the governments gotta move in the phase two direction and effectively, em, what they need to do is start thinking about the next five to ten years and what type of companies that they want here and how they're gonna rationalise that to make it happen.

And in terms of when you look at countries like Israel where there is a high level of early adoption by the government. Do you think that if the government were to do something similar here like you just said that we could become as competitive as and as cluster like, I suppose as some of those countries?

Yeah, yeah, who wants to go to Israel. Like the Israelis have done well and we've got one competitor from Israel eh, but we'd be stronger than them, we'd feel like we're the stronger proposition so we can compete with them. Eh, but it's up to the government to just stay focussed on building our strengths up and eh, Enterprise Ireland was very good to us in the early days but they have shares in us now that are worth more than any of the money they ever put into us, so they've done well out of it. But, they were important certainly in the very beginning and eh, they've done a good job they just need to look at a phase two plan now.

Do you think that Enterprise Ireland was, I know that you were going to, you spoke about earlier with your experiential knowledge you were going to go international no doubt about that, do you think that Enterprise Ireland in terms of

putting some money into the Firm And in terms of the business that Enterprise Ireland actually do, do you think that helped at all?

What do you mean about the business that they do?

In terms of em, trying to aid companies to go international, do you think they were a help to you in that sense?

No, we went international off our own bat, but they did give us money and stuff, when we had customers they gave us money. They were probably backing companies a bit too early after, after our business, two or three years later it seemed easier to get money from them. They were important as an additional eh, seed capital business and they, they've always been very friendly, they're very good at getting eh, government ministers and stuff like that for signing off contracts and stuff. They do a good job and they're very well eh, recognised in their own space by other countries so, they've they have an important role to play.

*Appendix E ~ Sample Key Informant
Interview*

*Appendix E ~ Sample Key Informant
Interview*

Date.....

Time.....

Agency Forfás

Conducted with Manager

Looking at companies, they don't really set up with a business frame in mind that they're going to go international in general, but in software you have to because the domestic market is so small.

Well I think it could be said for a lot of service firms that well, well, aside from your general services like your hairdressers and the like. But generally, one of the things that the companies find here is that they're being pushed into if you want to use that word, internationalisation, prior to them either having eh, scale in one area, or having had sufficient time to test the product on the market place or having even a reference client so there's a lot of, there's issues that face them because if that.

Absolutely, and I'm actually looking at the concept of networking and relationship building as a facilitator for that internationalisation process, so you because you know many firms can't really set up and decide okay, today I'm going to take step one and I'm going to do this you know it's not a stepwise process at all it's kind of go for organic growth and get your scale and try internationalise and try get out there as fast as you can. So that's interesting from that point of you know compared to manufacturing especially.

Well I know this might be of interest. I know it's one component part of software but it's in wireless communications (hands report) specifically because we have quite a strong base both in indigenous and in multinational and companies in Ireland in this area and one of the key recommendations that's coming through, is there, there is a forum that has already been established for this that would include academia and all of the company base looking at how they themselves might help to develop the critical mass so that they might collaborate and network and all the rest of it. So this is actually looking at this as well in well the cluster concept or network concept can be enhanced so that is identifying, well this is getting down to actually identifying specific gaps in capability and competence where they might be filled. And then you have a comprehensive and complete sale of Ireland at a top level and then these competencies coming in behind so I'll leave you with that (great). Em it is a technical area em, but it's, it probably gets in behind it and the competencies in behind it. The interesting thing behind it is the

importance in a network environment the alignment of em, research and particularly of applied research, which is industry, based.

You find that in wireless there's actually a disconnect so you don't actually have them reinforcing the component part of academia either understanding industry needs and in specific to the Irish industry, Irish based. I don't necessarily mean just indigenous when I say Irish based em, but understanding the specific needs that they're trying to fulfil the, that the customer needs that they're trying to actually fulfil and cultivate a tighter linkage between the two and how to help them reinforce that. I'm just trying to think, maybe I'll leave you, if there's particular questions then that, you have...

Okay em, I believe that you work as part of the infrastructure and enterprise policy department (that's right yeah) and I believe that there's major goings on in terms of em, reports being issued and stuff like that in terms of internationalisation of services being a large part of that, can you tell me a little bit about that?

I can tell you some, but we're at a stage where I can't tell you an awful lot I suppose, but because of em, there are a couple of trends happening if you like globally, in that there is an increased servicisation, if you want to use that phrase, which has been used of, of products. So, you will have actually services wrapped around products, particular solution services products in themselves of and also you have the pure sell of services particularly of services that are internet-enabled em. So you will find that in more developed economies, maybe over 70% of their GDP is em, sorry, is respected to the service contribution em. Ireland has gone, I suppose is gone, we're in a phase of transition at the moment. We're very; very strongly, production based and oriented largely, having achieved that largely on the back of the 10% tax regime, which was an extremely attractive to multinationals. Because we're no longer a low cost economy, because there are, there is an increased pace of globalisation and we see emerging markets like the India, China and even the accession countries coming into eat our cake, it's time to step back and say, what, what's next and where do we go from here. So looking to other developed economies, we see, as I say an increased contribution on the services side, we also from on home base we see that the 12 and ½ percent corporate tax rate, which is now applicable to all trade in services.

There's likely potential in internationally traded service that we haven't really harnessed to date. So, this could be anything from eh, healthcare services including clinical trials,

em, education services to overseas students or investing in overseas markets em, looking at agricultural services and whether or not there's a market around agricultural services coming from our strong agricultural base. So looking at a wide range of services and also looking at the opportunities from the new global business model, which would include supply chain management em, IP eh, intellectual property management, which again would tie in very closely to software. Em, the software we have looked at as part of the ICT area Information communications and technology, which also includes eh, a hardware-manufacturing component. Em, in general though if we were to sort of step back and take a high level eh, we're probably seeing a lot of the problems being cited now of issues by companies that has been around for a number of years and the main challenge now is how we're going to crack that nut. (Laughs), em, the issue of scale as you've said before is probably one of the more significant for the indigenous base across the whole services em, sector, em, in the services themselves. There's the issue of the nature of the service, em, in general, if you, you dealt with services, the delivery and the consumption happen at point, at the same time, so question is Ireland hindered by its peripherality to the European market we're an island off an island off the markets, em. That is part two, but eh, particularly with the em, support of technology, is that something that can be overcome, so we're looking at potential around what I call the e-related services. Em, so internet selling so you're looking, categorising these to be Emusic, em, Egames em, we're also looking at Epublishing em, B to B marketplaces which would really be around, these issues are around is supply chain management and supporting all of that. so by having the remote delivery of services obviously is particularly attractive to Ireland, but that's not to say exclusive, there are some other em, other areas that we would look at are worth looking at, em, again I think the. so we have the scale, funding then particularly for the em, early start-up phase can be challenging for companies and the opinion varies. Some might say, the funds are there if the companies have a good business plan and if they can prove that they have a good business plan and a well thought out process, and market strategy and can avoid the me too and can know the market and know the customer and know what they're about, then the funds are there.

But when you scratch the surface a little bit deeper you find that for some particular em, sectors that might be less, because they're regarded as higher risk, games would come to mind in that or any of the media, film media, broadcasting, related animation activities because they often, because of the nature of their business, it's project based and one major project you're working on it for eighteen months and then you are into the next

cycle higher risk doesn't really fit with the development agencies model of sustainable development and continuing employment and that would be the issue for a number of the companies as well em, and I think eh. They, they would be the two, the scale, market intelligence, access to market intelligence and understanding the market. When you're of low scale, there's a cost involved of getting out there into the market place. How do you do that and how can you realise it, now in some ways we're also teasing out the whole area of networks and eh, how they can be realise, but they themselves tend to create their own problems, I mean companies need to be at a stage of maturity and I don't necessary mean that in growth, but in em, management maturity, you know where, where the they realise and understand the benefits that can be gleamed from a network in terms of, of the transfer of tacit knowledge in terms of maybe the identification of international projects that they can find somebody that has complementary skills, that you have the opportunity to align or partner and I don't mean that in the formal partnering sense, em, to address a particular project so em.

But as I said there needs to be a sense of maturity and trust in all of that because I think generally with the smaller companies there's an element of protectiveness around them that this is my baby and I'm not going to talk to anyone because they'll steal it, type of mindset. Em when you are talking about cultural things em, that is quite difficult to overcome, it's a longer term, it's not to say a longer term sell, but it's a longer term initiative em, in trying. But I think the ultimate, or the, the, the starting point really is insure that companies really understand the benefits of networking em, and obviously if you are looking at networking you've got very clear objectives, very clear em, action orientated you know delivery mechanisms em, clear eh, industry led. Because there's no way government can determine how the companies do this, so there's a lot of stuff actually around nets and actually trying to make it work em. I mean that's a very broad question you've asked me so I'm kind of flitting and am I flitting in the right direction (laughs) (you are), I'm aware I'm flitting em, because we're em, still pulling together em the threads of the final report we're nearly at this stage we're putting together the final piece, eh.

What I have and maybe what I can just maybe give you eh, it might not be of any good use to you, but it is sort of a synopsis of what's happening globally and what's happening in Ireland in services, not, it's not software specific but it will give you sort of a synopsis of European directives of productivity in services and a couple of other things that are

coming through and obviously have sources there, you know if you need to dig in a little bit deeper there. There are other reports out there, (I have that one) you have that one, em, and the ITS, you have that one, that one I know is back from 1999 yeah it's amazing how it's still, maybe not basic facts but still so, but the issues, so in a way there's no easy answer em, and we are still grappling at how, how best we can, we can overcome a lot of these issues, that are facing the, particularly the indigenous but certainly the Irish based companies. I mean we would also see a need for the multinational base, which has been strongly embedded with production to try to bring in mandates that will try to bring them in closer to the market and customers. Because they have really been distanced from the marketplace, they have been servicing the internal corporate customer and where Ireland has benefited from the multinational em, base here is in eh, raising all boats in terms of sales and capabilities and production and automation and world class and all that. We haven't got the same em, vehicle in the sales and marketing side em, but they themselves in order to ensure that they continue to eh, create value for the parent Firm And to ensure that we can continue to sustain the multinational base in Ireland, which is extremely important.

They really do need to be moving their tentacles out to the customer where it doesn't necessarily mean that it has to be sales and marketing, because that would be a huge challenge for Ireland because of our location, and London you know, is the hotspot for early investment into European markets, em, particularly by US companies em. But there are other elements of sales function as regards the eh, multinational national base could look at as regards the market, eh, order management, product management eh, market research eh, sales forecasting, so there's a number of things there that eh, regeneration, eh, outbound con, eh, eh, sorry outbound contact centres like Dell eh, in terms of the sales function, there's a lot of other things but we do need to look at both sides in terms of raising the capability of sales and marketing in general em, and that, that would be essential.

In terms of leveraging you know the benefits that multinationals can bring you know going back to the networks and the relationships, do you think that these companies can kind of, when I say learn but you know, leverage the advantages that are there already?

Oh absolutely, when we talked networks I think it's kind of getting important that it cross the board in terms of multinationals as well as indigenous. In fact I think that there's a

two way, as much of a two way street, I think there, and this a personal thing maybe more so, there has been a view that the multinationals are succeeding and all the indigenous will learn off them, but in terms of software in particular, em, it's very much the indigenous base companies who are generating new technologies. Eh traditionally, eh, not so much lately, but traditionally, the multinational software base was on localisation or on the manufacturing, the packaging the fulfilment all of those sort of thing. Now we've seen in recent times we've seen alright the, the multinational base getting much more deeply embedded in development like Nortel in Galway who have the global responsibility, they're designing, in IT design and software but you, there certainly is a transition where they're getting more deeply embedded in the actual development. so having said that there's huge technology competence in the indigenous base, so in the software, it really is a two-way street and yes it's absolutely essential because what I think that the multinational base brings there is methodologies, software engineering technologies eh, and capabilities, eh, process things they have to minimise and manage risk eh, throughout the process you know, they've all these gateway processes and milestones and when do you need to invest and when do you need to dump it and all of that.

So there's a huge amount of what I would say process and em, innovation, technology and management processes that the multinational base would have more so than the indigenous, where the indigenous would have very strong technology base competencies. Both I think do suffer to some extent to suffer from the market. There can be a tendency for technology companies to sell the technology and it's wonderful piece of technology; it's all bells and whistles without outlining the benefits. But there's still tendency to be proud of your technology, this is marvellous. But at the end of the day the customer wants I don't know what the hell it's gonna do for me and what does it mean, and is it going to make my life any better and that's the whole sales, selling capabilities.

Again when you look at innovation and you look at what the government is doing like the digital hub in the liberties to foster entrepreneurship, innovation, because again what we have because Irish people are quite innovative, I know it might not be harnessed as such but especially with software development we're quite creative and we have a culture of entrepreneurship and when you set up a centre like this to try and harness it and try and get it out into the marketplace, do you think that there's room for more of those kind of initiatives or?

And I would even go as far as to say that I think the digital hub is only now, only recently is getting legs if you want to put it that way, I think we've very much focussed on the building and on the location and em, I think in more recent times, I think they have started to look at how they can best harness this innovative capacity, this area of tacit knowledge, and looking at maybe developing some government supported eh, digital hub supported project and initiatives that would, that will, to some extent force collaboration and I think in some instances, eh, we probably have a need to em, at the early stages anyway, to help companies to jump that first hurdle of working as a team with another company to develop enough of a mindset and a need, you know if I don't do this, I don't get any piece of the pie. Em, so yes, I would say yes, the digital hub is starting now to gain some traction, em, I do think, what I would like to see happening is eh, if we could have eh, one or two case study or type eh, sorry one or two pilot scheme of networks that was really eh, aggressively, eh, pursued and supported, em, and I think that we would also see that working with companies that already have some international expertise that already have a foothold in the market that they are garnered and that there isn't a view that they've made it.

So, they're alright, they are a hugely important part of any network and their ability and awareness to share knowledge, what pain they went through, what pain they went through that they might have avoided had they known something else. So I'm not sure that the digital hub has quite got that kind of a link to it just yet and I think then the linkages then into education systems in terms of em, improving the sales and marketing improving the international awareness of generally markets, whether it's through visiting lecturers who have international experience, whether all on a contract basis and so they would try to see that. We need to start looking outwards more than we have been doing em, because we've looked out to the, the UK, which is relatively, a relatively easy first step, which certainly isn't as complex as some of the cultures in the other European markets. Em where you have the culture, the language, the process, the mindset, all of those other cultural issues that is hugely important to understand if you are trying to break into new markets. Em, whether or not these networks as well can be enhanced so that they have a role themselves in terms of em, identifying or sorry or carrying out market research but again with the understanding that the market research is one end but the application of it so you've got to insure that that link is there as, as well. You keep crossing out these things, laughs **It's a good sign; it's a good checklist for me.**

Em, in terms of harnessing the government as an early adopter of technology, do you think that's em, possible?

There are varying views on that as I'm sure that you're aware, is it one of these or is it a and different one. Em, you've probably seen that around some IBEC stuff anyway you know in terms of the government eh, the, they're trying to present that some of the government procurement would be focused toward the SMEs and those type of initiative, em, other countries would certainly cite the government as having a key role in fostering, generating innovation. Trying to make that happen is then and how best I'm sure that the 20% is the one that's gonna make it work and then there's also, there's other issues from an EU context and all the rest of it. Em, my first answer is yes, the government does have a role, my second would be that I do feel it has come out with a tremendous strategy on its Egovernment it has made some inroads eh, particularly in tax and revenue auspices, em, it definitely needs to do more, em, I think that in the way it goes out to tender, it could help in some way to looking for new innovative solutions, so not just buying the Dell packages off the shelf or whatever they need, software equipment, might be customer relationship management or but I'm not sure how exactly that could be, I believe that it has a huge role to play but I'm not sure how its been harnessed. I mean we look even on telecoms for example, all of the government telecom needs are provided by Eircom, and em, retail and broadband and telecoms has been a huge issue in trying to create competition in that whole area, there is an obvious nut to crack if one could do it em, but obviously for them it's convenience it's purchasing power it's all of these other benefits that concentrates it.

Ultimately they're probably saving tax payers money but I think it should be seen as em, there we would be an added cost perhaps in their procurement but a greater benefit, I'm not sure that we can actually capture that, you know how you can actually assess the cost benefits of some of those initiatives, like some would say like in em, their construction contracts as well that they could done harness more GDP and ensure then that there is some future proofing then and innovative technologies or the use of technology eh, in tenders it's a little but it's hard one to, to come up with again, the one easy answer, em, I mean the, the government is one on one side an then there are maybe some of our major companies I suppose national and multinational em, who also can play a role in sourcing from local providers and suppliers. But obviously local providers and suppliers have to pitch their game. So they have to be up there as well to compete effectively and I do believe that if an Irish entity proved its worth, if they're on an even keel with an

international competitor I genuinely feel, it's a gut feel that you know, you go for the Irish one, you know in the marketplace, you understand the culture and you can work together and negotiate all of those sort of things. But em, I don't know how prescriptive one can be in those instances.

What em, this is kind of double question, what barriers and or threats do you think that there are for indigenous companies trying to internationalise their services and how do you think we can overcome them?

Well on the software threat, well the main threat is, is India, em, as another country, whose extremely aggressive forward thinking. The threats and opportunities because I would see the accession countries in the EU as being both, one is new markets, two is new competitors (laughs) that we don't yet know what's there yet but anecdotally their education systems em, large output extremely high quality and lets not keep our heads in the sand, the other threats we would we have as we go to the EU is the, the home base might not be as secure as we would hope or would like, it's a two way street, where we would be looking to internationalise, so too would, would other countries em, probably the only thing that is of benefit to us is that we're a small market, probably not the first place they would be looking to, probably it wouldn't be on the major side of the threats, em, I think understanding, which again I would see a lot of the threats, what would be perceived as threats as being opportunities when you see global business models that are coming through in terms of IP management, licensing, branding for the Irish companies to become really aware of the value of what it is they have, em, assuming that is a value and not a me too em, but again looking for mechanisms of em, generating revenue, whether or not they would use a license mechanism, risk reward, sustaining market, billing on a per project basis, there's quite a lot of em, opportunity around business models em, which could be from a couple of ways one of those could be the product development itself, ways of developing the product, it maybe using some low cost countries themselves and managing their intellect and their management capabilities and core design and research in the home front em, lowering your cost base of your final product in that way em, so embracing what, what's going on in terms of globalisation and global business models rather seeing these as threats, can be twisted.

When you think of a threat, this is more than looking at the outside, is the scale and that's trying to jump that, I know we keep coming back to that but that really is, now why there is an element of that, that's mindset, lack of aggression, you know, what's the

government doing for me, you know what can I do for myself, you'll have scratch a lot deeper to see you know em, because again in talking over the last few months with various companies and trying to get, a lot of the more experienced players would say, the opportunity is there, they're out there and they're just waiting to be got and these guys, you always say guys, these guys just don't seem to be able to get there or to promote themselves professionally or know where to go or, and my next question is, well why don't they, I don't know the answer to that one.

A lot of people think it might be a lack of sales and marketing, again going back to what we said earlier.

Sales and marketing capabilities, em, yeah I mean there is certainly a view, well we're not the best at sales and marketing, I think particularly international sales and marketing em, there's a view there that there's probably sufficient and adequate supply of sales and marketing graduates, that the lack of that companies won't hire them because of their lack of experience from an company perspective, particularly with technology companies, they want somebody who has a technology capability and a sales capability, so very often they will take the technology people and throw them out into the market as opposed to even give them a modular sales, sales programme, so I think the whole area of the education system around sales and marketing does need to reassess em, the programmes that it is, that it has devised. The technology and the programme should have a module on sales and marketing, sales and marketing graduates should have more of an opportunity throughout their em, throughout their education for in-company service and cooperative eh, arrangements in companies and I think that then the whole area of sales management then, insuring that as have your guys out in the field, they're dealing with the customer, they're gleaming the market and the customer intelligence about what the hell is happening with the customer so that it comes back to the centre and you can aggregate, so therefore you can have some sort of information and knowledge so that's sales management capabilities that I see. There's also a view em, generally within SMEs that I think there's as low as 30% of them doing sales plans, they say that the actual planning is hindering the process or the action, well they're all running around like headless chickens, (laughs) and they don't know what direction they're going and they'll still be running around, so there's still, there's still a lot around sales and marketing capability in a in its own right and I'd say that's for both multinational and indigenous.

And at the same time I would also point to the factor that Ireland has even proven its own capability in em, in harnessing the system to focus on a particular need for example software graduates we were putting out went out got money we did it we made it. I think again this is a barrier that is not insurmountable and it requires some focus and some focussed efforts em, and I also think that Enterprise Ireland probably has a role to play in its overseas network of maybe looking at a more sectoral focus and developing their own competency and capability in market and mechanisms for disseminating that back to the relevant companies that they see fit so quite a lot of linkages could happen on that on that area. Em the now what am I saying, bringing it down to minimum, em, barriers, like I know when you get down to the European directives and then looking at em, trying to reduce the barriers across the em, eh, sorry barriers to entry, so a couple of them are locally imposed and others not, some of those are cultural or administrative and there's various issues around that.

There is a lot certainly efforts being made in reducing the barriers we still find that across countries, I suppose if you're dealing with the States they've the one language, there's the language, there's the social and cultural differences and there are there's are administrative and regulatory in standards differences still, em, which in one way you're talking about HR where you are looking at service centres in Ireland, particularly in financial services, if they were to try to move into the higher value sort of HR services. There's a huge, a plethora of challenges around regulation around labour law for each of the countries and they, they are hindering factors em, in a lot of cases, em, barriers are, I think one of them, again it comes back to the scale but it's how because of the, the lack of scale the companies are hindered. Sorry you have the lack of scale in one hand and you've the acknowledgement that there's low capability, relatively low capability in international sales and marketing in sales management and actually probably in financial planning, longer term strategic planning so how do you pull out a someone or two, in planning these ten man operations that would get the time to do it and to generate sales (laughs) so where all of these things seem great and ideal, I think any mechanism has to be constantly aware of those constraints, em, so you need flexibility in those systems in your education and training you need to ensure that networks are appropriate and are clearly identified benefits and functions and objectives (bangs tables) that are relevant to the company em, like you would see some companies saying if we go over EI on a trade mission it doesn't you know, it doesn't really, it's not like you know everybody hop on a bus and you go out here, more specific and more focused to either segment or sub

segment or niche opportunities and then you've got relevance and then he can afford to take the day or half day and then he knows, I keep saying he, but you know what I mean the collective em, then, then it's sort of a winner so there's, there's a, I think that any of the mechanisms that have been devised to overcome these issues need to really understand how the company can engage and the relevance at the end of the day. Now and that's another challenges is how do you make it relevant to certain people, in terms of scale on the one side in terms of specific references on the other. But, I think there are mechanisms and I think we could go for sort of early wins where there are companies, a collective almost, coming behind that a little bit more so I think that these early wins are the way.

If you were to say in five years time, what would you see the sector as doing. I know you have looked at more general international services as such but if we take a general viewpoint that Irish companies are internationalising their services?

When you say how, do you mean in sectors? **No, in terms of how does it work, do you think things will have moved on and what for the future?**

I do think em, the idea of collaborating and networking is very strong if it can be made to happen, I do think it is important to identify some early wins though (will you have a cup of tea or, (oh no thank you) you don't mind if I have mine do you, (not at all) thank you very much, sorry, em, so I do think if you can get early success in those type of almost a self fulfilling prophecy, yes it works, we want one as well. And we know we have to put in our effort to it. It requires being industry led, em, which is very important, because if it's not industry led, it can lose its relevance very quickly em, so I do think that.

Then to a larger extent, my, my, this is maybe quite motherhood and apple pie. But in five years or ten years, I think that when, when you get this culture of networking, em, knowledge transfer a couple of other digital hub-type innovation environment em, and that then becomes very much the culture and the obvious way of doing business. Em, and I think there are only benefits to be gained from that em, but it does mean getting a couple of early quick wins, success and reinforcing the model, I think if we try to be all things to all people, at the end of the day, like it's gonna be fragmented and it will end up no use to anybody and trying to satisfy everybody, there has to be few choices made, and I dunno what they are yet you've limited resources you've got to use them well.

Especially when you see companies like Iona who went out and from nothing such created this huge enterprise and there was a lot of talk and huge publicity and that influenced a lot of companies to do it and with the success of that company they thought if they can do it we can.

Yeah, yeah then, as I say, it does generate a belief and also because there is an intelligence and expertise and experience that Chris Horn has developed, and he has been willing to share. And I think that there is generally within the Irish people in the generally in the construction industry and engineering, em, and this type and if ever an opportunity came to source products from Ireland or to partner with someone who was you know open to all of this assuming of course that they have the professionalism of course, they still have to have standards, they're not gonna take a lower standard. But I mean a lot of the issues we've been talking about have been around for a long number of years and I think why it's become more critical now, is because of the increased competition from other low cost countries that we now really have up our game, all this terminology almost as bad as moving up the value chain, em, though where there might have been lip service paid to some of these initiatives. I think you need focus and energy and drive behind them and you have to make choices you can't be all things to all people, look where the wave moving and come in behind it strongly and make it move faster.....

Okay I think that's about it.

Appendix F ~ Analysis Data Display

Appendix F ~ Analysis Data Display

	Firm A	Firm B	Firm C	Firm D	Firm E	Firm F	Firm G	Firm H	Firm I	Firm J
Founded	1987	1994	1997, rebranded 2001	1997	1993, rebranded 2001	1999	1998, rebranded	1998	1984	1999
Location	Dublin	Dublin	Dublin	Dublin	Dublin	Dublin	Dublin	Dublin	Dublin	Dublin
Manager	Joined 2000	Owner managed	Joined 2000	Owner managed	Owner managed	Owner managed	Owner managed	Owner managed	Owner managed	Owner managed
Business Activity	Pharmacy Solutions	Business integration software	Spatial technology software	Localisation services	Insurance software	Mobile and Wireless software	Platform software technologies	Fraud, risk management and CRM software	Logistics management software	Online accommodation bookings provider
Employees	70	40	25	150	210	24	30	50	80	37
Reason for starting the company	The firm founder's next door neighbour requested software development to print labels on medicine bottles	Met company-founder and established the firm	Company rebranded in 2001 to commercialise domestic success	Dissatisfaction with previous company when it was acquired by another player	Previous employer was bought out by another and the founder felt dissatisfaction at how the company was being run	1999 was a good year for new technology and the founder recognised that there was a large market opportunity	The founder had founded a previous Firm As a funding mechanism, saw an opportunity to create a niche market.	Felt that there was a market for applying data cleansing and data gathering techniques and apply it to a CRM model	Wanted the flexibility of owning his own business	Realised a market opportunity existed to provide a gateway for online hostel bookings across the world
Locus of production	Ireland	Ireland	Ireland	Ireland	Ireland	Ireland	Ireland	Ireland	Ireland	Ireland
Initial domestic focus	Yes – 1 st market	No	Yes – 1 st market	No	No	No	Yes – 1 st market	No	Yes – 1 st market	No
Started Internationalisation	1998	1994	2000	1997	1994	1999	2002	1998	1985	1999
International Mindset	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Internationalisation trigger	Unsolicited order into UK	Client-seeking	Unsolicited order	Client-seeking	Client-seeking	To service German client	Client-seeking	Client-seeking	Client-seeking	Client-seeking
Previous Internationalisation Experience	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Internationalisation Strategy	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes
Strategic	Yes	Yes	Yes	Yes – supply	Yes	Yes	Yes	Yes	Yes	Yes

Appendix F ~ Analysis Data Display

	Firm A	Firm B	Firm C	Firm D	Firm E	Firm F	Firm G	Firm H	Firm I	Firm J
Partnering				side						
Overseas office	Yes - UK	Yes - US	Yes - UK	Yes - Three in the US	Yes - Holland, Denmark, UK, US, Australia, and New Zealand	Yes - Japan for technology watch. France. US and Kuala Lumpur closed	No	Yes - UK served from Ireland Benelux,	Yes, UK, US, Holland	Yes - Australia
Fn of overseas office	Sales presence	Sales presence	Sales presence	Sales Presence -	Sales presence and local support services	Bit support	N/A	Sales Presence	Sales office	Sales Office
Fn office staff	Irish employee	Irish employee - aim to employ US	Irish employee	Irish employee	Irish employees - aim to employ locally	Irish Employees	N/A	Irish employees and local employees	Irish employees and local employees	Local employees
Reputation and credibility	Very important	Very Important	Very Important	Very Important	Very Important	Very Important	Very Important	Very Important	Very Important	Very Important
Domestic Market	1 st market	Global orientation	1 st market until the company rebranded	Serving Subsidiaries of large MNEs located in Ireland	Limited exposure - Global orientation	Global orientation	The company served the domestic market after setting up	Until 2001 the company had a 60% customer base in Ireland	The company have a large domestic base	Global orientation
Market progression strategy	Organic growth Irish market leader Partnerships - local customers and suppliers Unsolicited order but product had limited international scope Strategic partner - credibility and reputation	UK seen as extension of domestic market Tried to expand to CE but found it insular Slow growth Low risk strategy with strict time frame Move through English speaking countries	UK not initial choice until the company refocused strategy Similar culture, accessible Good dynamic Easy to serve Low entry cost	Quickly pulled in a number of large clients Launched a PR campaign - aggressive in the beginning trying to find clients. Now more refined strategy Leverage reputation of existing customers and try get a pilot projects	Use contacts and reputation built up with previous employer and countries which the founder had previously worked, lived Locate a customer before opening offices and invest in a market - attack the market from the inside out, Risk adverse way of doing business	Look for an internal champion Use networking, credibility and reference clients Enterprise Ireland as a source of contacts and networking Currently concentrating on geographically accessible areas like Europe	Used previous contacts - domestic market exhibitions, seminars, conferences targeting and cold calling techniques The company gained entry into a large German bank and had written contacts in Europe when the market turned in 2003	In 2000 the market collapsed The company had to change the product set and further internationalise Lost five major clients due to market forces Made the transition to 65% new market which was risk and 90% internationalised	Looked to the UK and then to the US after domestic market Sold into Irish subsidiaries climbed the ladder to HQ Long sales cycle Leverage reputation Small number of large contracts	Opened overseas office shortly after inception Undertook country visits in an effort to entice new customers to avail of the service Once some overseas clients signed up other customers followed
Future market	Looking to gain	Nothing different	Looking to	No more sales	Looking to	An IPO is not a	The company	The company	IPO is a	The firm is a

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	Firm A	Firm B	Firm C	Firm D	Firm E	Firm F	Firm G	Firm H	Firm I	Firm J
progression	<p>more UK clients besides Strategic partner</p> <p>Looking to expand to CE, CW and US</p> <p>Markets close to UK and Ireland in terms of regulations and ease of fit with the system</p> <p>Enter Strategic partner's network and piggyback</p> <p>Engage strategic local partners in each country to sell into the local marketplace and allow local partners to customise</p>	<p>than current strategy</p> <p>Have local partners on the ground for every location</p> <p>Low risk strategy under a set time frame</p> <p>Capitalise on early success in US and gain more customers</p> <p>Operate in a niche in the US</p> <p>Target customers in the US</p> <p>Potential Australian deal which may permit setting up an Australian base</p> <p>Perhaps Eastern Europe</p>	<p>internationalise further over time</p> <p>Have completed a three year business plan</p> <p>Future market progression strategy is to continue organic growth at a reasonable aggressive year on year percentage</p>	<p>office at present due to the size of the Firm And the fact that most potential clients are based in Europe</p> <p>Emphasis on ensuring the longevity of the company in the future while still growing the existing base</p> <p>Major continuity plan</p> <p>Maintain current customers and ensuring longevity in the firm</p> <p>No interest in acquiring or IPO</p>	<p>Canada</p> <p>The future will be the non English speaking countries like China, Japan and the Asia pacific region</p> <p>Possibility of an IPO in the next few years</p> <p>Stay away from South America, no market there</p> <p>New growth markets in Europe, Germany Eastern European countries</p> <p>Grow the business in the US and break into the Asia Pacific market</p>	<p>credible aim at the moment</p> <p>Perhaps go for an Aim listing in the future</p> <p>The company have considered both trade sales and acquisitions for the future, more likely that the company will go for a trade sale with a US company so they can enter the European market</p> <p>Become a leader in its field and has a proven track record in terms of patents, innovation and IP</p>	<p>has decided to opt for a merger with a much larger entity to exploit the market that they feel has not yet taken off</p>	<p>hopes to operate a sell through model where the company engages channel partners to sell and distribute the solution</p> <p>The company will be floated or sold in three years</p> <p>There's a cycle of grow or die in the software industry</p> <p>Looking to build a company that will deliver serious profit and the test is whether the company can do that independently or not</p>	<p>possibility but it's a different business, you could make or lose a lot of money by IPO</p> <p>In the future not a radical departure from the existing model</p> <p>The company has a decent market share, now looking for a larger US market share than Europe in less than five years</p>	<p>market leader with no competitors</p> <p>Future strategy will consist of mechanisms to secure the firm's position as market leader</p>
Challenges and barriers	Scale – dealing with larger	High entry barriers into CE	Scale - when looking to win	Finance aspects of setting up the	Scale despite the fact that the	Overseas political situation	When the market turned the	The market collapsed in	Scale - undercapitalised	The company found that

Appendix F ~ Analysis Data Display

	Firm A	Firm B	Firm C	Firm D	Firm E	Firm F	Firm G	Firm H	Firm I	Firm J
	clients		large projects	business	company is a large domestic company this seem to matter when approaching large clients	Hard to protect your IP	company lost contacts throughout the market	2000 two weeks before the company was due to IPO	and more prone to being messed around by your customers	dealing with international markets is difficult in terms of language, culture and translation issues.
	Finance – dealing with Strategic partner and expanding on the back of the contract working out with Strategic partner	Different decision making criteria in US and CE	Partnerships may be very time consuming with little reward in some cases	Finding suitable staff with a similar ethos to the company		Scale is an issue, when entering large MNEs	Challenge to get the company profitable	Customer demand and the market collapsed, the company didn't raise the money needed and was left with a large number of subsidiaries, employees and no market	The fundamentals of the market change very quickly	
		Finance		Finding suitable premises after the lease on the previous location had expired	Irish Financial services companies are now focussing on building their own software,	Obtaining work visas for non national employees to go abroad to service customers				
	US market - set up costs and localisation	Initially built a product without researching the market	You need a minimum royalty agreement or commitment in order to commercialise on partnerships				Challenge when the foreign CEO came in and failed to make any sales		Competition taking market share	
		Not being American		Retaining staff because of the size of the company,	Cost of travel abroad and putting local offices overseas	Cultural issues in language and knowledge of the local environment			Legal problems have nearly materialised in some instances	
	Time frame in internationalising - could be due to lack of international mindset	Finding reactive partners.	Getting customers to believe that you will act as if you are located in close proximity even if you aren't	Scale – smaller company	In 2001 the company sought funding overseas, but the deal collapsed					
		Companies opting for low risk routes with IBM		The speed of the growth of the company		Financial inducement in some markets in order to enter		Scale	Biggest danger is inversion that the regulations for the technology that the company is offering changes	
	Entering new markets entry barriers	Language - CE	Buying and selling habits in different European countries	Price jumping from larger companies	The company had to go under a restructuring period			Challenge to find reactive staff	Difficulty in dealing with staff	
	Culture - CE	Technology change				The firm was also hampered by delays in payment, and that's a culture shock in some instances			Issues of trust and management with staff	
	Localisation and culture – US, CE	Scale – potential customers in US and UK		Differentiating the service form competitors	Many companies are reluctant to change their back office systems					The fear of the unforeseen coming to attack the company
Competition - US	Culture + people – US, CE		Different time zones, different cost bases	Breaking into large clients				Overseas cultural and language barriers		
Surmounting barriers	Appear larger Strategic	Entering countries in which it was	Demonstrate to companies that you are a robust	Offering extra facilities for customers such	The use of partners allow the company to	You need local knowledge in order to operate	The firm's original CEO was reinstated	The company restructured and as a result made	Markets are big, there is always another way of	Adopt an informal approach to

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	Firm A	Firm B	Firm C	Firm D	Firm E	Firm F	Firm G	Firm H	Firm I	Firm J
	<p>partners</p> <p>PR campaign highlighting company history and credibility</p> <p>Marketing campaigns to increase credibility</p> <p>Use systems integrator to service foreign markets</p>	<p>easier to sell technology in terms of culture and language</p> <p>Find an internal champion who wants to climb the corporate ladder</p>	<p>organisation with a strong balance sheet, demonstrate profitability and commitment</p>	<p>as a cross platform testing facility</p> <p>Taking enormous risks and hoping they pay off</p> <p>Spending every penny that the company made in order to make more</p>	<p>look larger when approaching clients</p> <p>The company may also hide behind their larger partners, allow the partners to conduct the business and service their partners as opposed to the client directly</p>	<p>in a market</p> <p>Long term strategic outlook</p> <p>Previous experience means that the company is aware of cultural issues and know how to deal with them</p> <p>Seek out the market leader</p>	<p>and was presented with the challenge of bringing the company back to growth</p> <p>Now the company hunts in packs</p> <p>Get the right team and know what the customers want</p>	<p>staff redundant, the Firm Also decided to change the product set to risk and fraud management</p>	<p>attacking it if a competitor gets too close to you</p>	<p>dealing with customers</p>
Perception of overseas markets	<p>CE – Nearest geographic market. No chains in some countries. Different market regulations. Customisation and translation would be required as well</p> <p>CW - similar health system to UK and Ireland. English speaking. Require little product modification closer and easier to do</p>	<p>UK – Easy enough to handle from Ireland</p> <p>Nature of people working in the UK is similar to Ireland</p> <p>Ireland regional hub of Ireland</p> <p>US – different business process</p> <p>Different ways of doing business</p> <p>Cannot deal with US from Ireland</p> <p>Need to have a sales presence on the ground, out of sight out of mind</p> <p>Lucrative market. Different</p>	<p>UK – similar culture to Ireland and enjoy doing business with Ireland. Easily served from Dublin.</p> <p>Cost of entry factors less than the US or other European markets</p> <p>Other European markets – language barriers or cultural</p>	<p>Culture is not really an issue due to the fact that the company deals with translators from these countries on a daily basis and would be aware of cultural issues</p> <p>Culturally the company would be aware of most of the issues that</p>	<p>The company founder had come across all culture issues in previous company</p> <p>US more aggressive than European countries, they're more of a sales and marketing culture like Australia and NZ</p> <p>The niche that the company is dealing in is already</p>	<p>Irish companies generally succeed well in Australia, Germany to a lesser extent</p> <p>Spain and some of the Eastern European countries like the Czech republic, and Romania</p> <p>There are cultural barriers in France</p> <p>The political climate in Italy is not favourable to doing business</p>	<p>The manager's previous experience in dealing with international customers provided the company with knowledge of overseas markets and how to deal with customers in large MNEs</p> <p>Americans are not friendly in dealing with the rest of the world</p>	<p>There are definite cultural differences in CE possibly to do with socialism as the people don't work for anything its provided for them</p> <p>They don't have the entrepreneurial drive that Irish people do</p> <p>In America they oversell themselves as individuals, you</p>	<p>American companies need to be impressed, the size and scope of the market is huge</p> <p>US - It's a huge homogenous market</p>	<p>Aware of cultural issues when going abroad</p> <p>Adopt an informal viewpoint of international</p>

	Firm A	Firm B	Firm C	Firm D	Firm E	Firm F	Firm G	Firm H	Firm I	Firm J
	<p>than CE. But differing markets in each country, not just one block</p> <p>US – Huge market but fragmented, highly competitive, localisation required Set up costs in order to integrate into the US health system</p>	<p>nuances in each state but basically culturally homogenous</p> <p>Continental, Europe – More insular Difficult to expand to EU has not broken down the barriers of culture and language</p> <p>Ireland closer aligned to UK and US than CE</p>	<p>differences that makes it more difficult to sell into those markets</p> <p>Spain, Portugal and Southern Europe – bigger challenge for an Irish company to sell into than northern counterparts</p>	<p>a company may encounter in an overseas market</p> <p>Staff are culturally savvy</p>	<p>globalised so that the company does not encounter completely strange countries, as the company deals on a global basis, a village within the globe</p> <p>Stay away from Germany and the southern European countries until the company has built a robust base in English speaking territories</p> <p>Stayed out of the States until the company had enough money</p>	<p>Other countries should be evaluated on the basis of their GDP, you can only operate in countries where there's a favourable commercial model</p> <p>Tend to concentrate on geographically accessible areas like Europe</p> <p>Have excluded the US due to reasons of liability and the cost of doing business</p>		<p>need to learn to make decisions very fast in America</p> <p>You have to be aware of the cultural issues before you internationalise and know how these are going to affect the company</p> <p>France is insular, you will only do business in France if you are a French company</p> <p>Germany is a closed economy, it's a large domestic market but there's huge entry barriers</p>		<p>markets</p>
Psychic Distance	No but aware of the issues	Yes	Yes	No	No in terms of market not culture – aware of the issues	No, in terms of market not culture	No	No	No	No
Consider Acquiring	Yes	No indication	Yes	No	Yes	Yes a very active consideration	No	Yes	No	No indication
Role of Enterprise Ireland	Providing contact information for possible networking	Market Research only Unfocussed trade missions	When Enterprise Ireland invested in the business the company realised that they	Very benign in their investment into the company Very	Enterprise Ireland do a great job but need to start getting world	Enterprise Ireland provide local market knowledge, insight, culture,	Enterprise Ireland do a reasonably good job	Very helpful but they try provide more services than they are capable of their	They do a good job They have to decide what they	Declined to comment

Appendix F ~ Analysis Data Display

	Firm A	Firm B	Firm C	Firm D	Firm E	Firm F	Firm G	Firm H	Firm I	Firm J
	Providing market research information	Good at introductions but they do not necessarily work. Need to create your own international opportunities	were committing themselves to overseas markets Facilitator of market entry in terms of killed and market facing resources, trade missions, conferences and company marketing at conferences	accommodating but not very aggressive, too complacent They've been very poor, most of their services are inappropriate When the company needed help obtain a premises Enterprise Ireland were not interested	class players out of Ireland and focus their efforts Enterprise Ireland have been good to the company, but they need to implement a phase two plan now for indigenous Irish software companies Well recognised in their space by other countries	advise on who's active in the market and provide contacts for possible domestic partnerships Enterprise Ireland and the government need to cooperate more closely in order to develop the indigenous software sector Lack long term vision	Their foreign office have been particularly useful in terms of networking and contacts They should have a greater role merging the educational side and the industrial side together	staff don't have the experience to help you Enterprise Ireland are energetic and helpful and try and graft on your behalf Its helpful to have the Tánaiste sign contacts abroad Their telesales service will follow up on contacts	are and what their function is, is it VC, marketing, market intelligence or what They're unresponsive and run along with the pack sometimes	
Role of VCs	Not indicated	Not indicated	When the VCs came on board the company realised that in order for the investor to get the level of return they had to look to international markets	None the company is privately funded with no plans to IPO at any stage	The company sought funding in 2001 from a foreign financial institution, unfortunately this fell through	Initially the company was set up on VC raised. Raised some VC in 2003 for product development VC are prompting the company to look at the acquisition trail	The company sought VC funding, as a result the VC insisted that an external foreign CEO was brought on board, however no sales were made during the period that the new CEO was in office	The company sought funding to go IPO but that fell through	The company is privately funded	Not indicated
Potential Threats	The slimming down of the market both in the UK and Ireland	India China and Israel China a serious superpower	The rate of underscaled companies in the Irish indigenous software sector is a worry	Software sector needs a considerable amount of consolidation activity	Ireland's cost base is too high and has lost competitiveness the emerging economies will	India, China and Israel China have a much lower cost base, very well	EU may introduce legislation to allow US companies to compete with	Positive about the future of the market In time the market will	India Israel and China They're well educated, aggressive and	Not indicated

Appendix F ~ Analysis Data Display

	Firm A	Firm B	Firm C	Firm D	Firm E	Firm F	Firm G	Firm H	Firm I	Firm J
			India, China and Israel		take advantage of that	funded and educated Indians are using nearshoring to enter Europe under pseudo companies, have superior funding and contacts Israeli companies are very well funded, disciplined in targeting markets	identical software and patent that in the US China, India, Israel and Eastern Europe Russia may also be a country to watch in terms of educated software engineers and technology	reach maturity	work for very little	
Dealing with potential threats	The firm hopes to be a position to acquire other companies and survive the slimming down of the market	Up the value chain at the architectural level. Don't try compete Outsource to India – current strategy	Different dynamics with those countries, Israel is coming out of a large military background, India is about writing software cheaply with an emphasis on IPR and China also has cheap labour skills	The government needs to adopt appropriate strategies to help indigenous firms	There's an argument for being where your market is and since the company has virtually no Irish market it could conceivable locate to another country in the coming years to exploit lower cost bases elsewhere	Chinese have a weakness in sales and marketing ability and telecoms market structure, Irish companies will have no choice but to exploit their innovation capabilities and operate in niche markets	Appropriate government and development agencies strategies Appropriate research and development funding	The lack of world class leader will impinge upon the success of the market	The company may decide to outsource development to cheaper economies	Not indicated
The context of the Irish software market	Future sliming down of competitors The market will come to rely more on	If the market isn't in Ireland, they should be where the market is. Set up elsewhere and capitalise on the	Challenge for companies to achieve scale to deliver ten million revenue annually	There should be a certain amount of consolidation Those companies should try find a US suitor	There are many challenges for the Irish indigenous software industry; a lot depend on the	Irish companies are small and undercapitalised should engage in merger and acquisition activity	The domestic market is too small Irish companies are too under funded - should	The domestic market is too small Irish people have a culture of begrudgery	The government needs to do more about the infrastructure For some failing would be better	Not indicated

Appendix F ~ Analysis Data Display

	Firm A	Firm B	Firm C	Firm D	Firm E	Firm F	Firm G	Firm H	Firm I	Firm J
	electronic data	cost advantages	Ireland must produce a critical mass of these companies; excuses of a recession economy are no longer applicable.	Unless they have a niche sector, then they need funding to get out there in the global marketplace	domestic market. There will be a shakeout and consolidation in the market A lot of these companies are run by inexperienced CEOs and sales directors	Irish companies are very bad at presenting themselves Irish companies have a lack of tactical vision or strategic planning Weak in sales with foreign languages Irish companies are very nimble and adept at innovation, but cannot exploit mainstream markets – set up by techies Irish companies are not good at filing and protecting their IP	focus on base level technologies Irish companies will ultimately be bought out by bigger players Companies should engage these researchers to develop specific projects More money should be attributed to base technologies The mindset of investors needs to be changed in order to provide more funding to Irish companies	Irish people don't network enough, There's no point in integrating two loss making companies together Needs to concentrate on corporate development and organising the business Second generation of software entrepreneurs is coming through now, people underestimate the growth in the market	than consolidation Many entrepreneurs would prefer to be on their own as opposed to merging You have to internationalise ASAP but not overnight as the dotcom era proved Need to spot early Irish winners There aren't enough graduates The industry will be remain static for the next few years	